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DR. WM. SMITH'S ENGLISH COURSE.

A
SMALLER MANUAL
OF
MODERN GEOGRAPHY.

PHYSICAL AND POLITICAL.

BY JOHN RICHARDSON, M.A.,

AUTHOR OF "A SCHOOL MANUAL OF MODERN GEOGRAPHY" (SIXTH THOUSAND).



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A SCHOOL MANUAL OF MODERN GEOGRAPHY; PHYSICAL AND POLITICAL.

This work has been drawn up for Middle Forms in Public Schools, Ladies' Colleges, Training Colleges, Assistant and Pupil Teachers, Middle Class and Commercial Schools, and Civil Service Examinations.

"After a careful examination of Mr. Richardson's manual, we are bound to say that it is the most comprehensive, accurate, and methodical geography with which we are familiar, and bears on every page unmistakable traces of careful and industrious research. We have been surprised at the amount of new information which we have found."—*School Guardian*.

"This work has many admirable features, the facts are classified and arranged on a distinct and consistent method throughout. Illustrative, historical, and other remarks are both numerous and interesting. The definitions of terms are clear, these invariably, and individual names frequently, being accompanied with etymologies."—*Educational News*.

PREFACE.

THIS "Smaller Manual of Modern Geography" has been compiled at the urgent request of many Teachers who have been using the Author's "School Manual of Modern Geography." They have represented to him that they need a smaller book, drawn up on the same plan as the "School Manual," which they can put into the hands of their *junior classes*.

This work is therefore intended to supply this demand, and it is hoped that it may be found to meet to the fullest extent the requirements of those for whose use it has been prepared.

The necessities of pupils who are beginning to acquire the chief facts of General Geography, have been constantly borne in mind, and no pains have been spared in the selection, verification, and arrangement of such facts to render the task of learners as easy and as pleasant to them as the nature of the subject admits of. Accuracy as to details also has been unremittingly striven after, in order that young students who shall have mastered what is here set before them, may have a solid and safe foundation for their future studies in the advanced branches of the Science.

In structure and general appearance this book bears a strong resemblance to the larger one, but it is by no means a mere abridgement of that work, for while, on the one hand, much is here omitted which finds its appropriate place in the "School Manual,"

on the other, much has been added here which would have been superfluous there. But in all which relates to the Geography of the manifold parts of the British Empire, the greatest fulness of detail consistent with the limits of the work has been maintained.

It is earnestly recommended that the book should always be studied with Atlas in hand, that the facts named in the one may be verified by constant reference to the other, so that they may become indelibly fixed in the memory. And in order to test themselves as to whether they *know* their task, young Students cannot do better than draw from memory rough maps of those portions of any country which they may have been studying, and fill in, also from memory, all those details to which the book has drawn their attention. This process, at first, may seem to be slow and very laborious. But Map-drawing is an exercise which soon grows fascinating to those who practise it regularly and intelligently, and its ultimate effects on the progress of Students are such as can be attained by no other means.

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GEOGRAPHY.

INTRODUCTION.

THE word *Geography* means a description of the Earth. Therefore books on Geography are written to tell us what sort of body the earth is, and such facts about its nature, constitution, condition, and relationships as intelligent people ought to know.

Wherefore, if we are attentive, we shall learn from our Geography books that the earth, which is the abode of man, is a heavenly body, that it consists of water and land, that it lies in a covering or envelope of air, and that it is in intimate relationship with the sun.

Obs. Speaking of the earth as a *heavenly body*, Geography tells us to what class of heavenly bodies it belongs, its relationship to the sun, and something about its shape, size, and motions. This branch of the subject is called **Astronomical or Mathematical Geography.**

When Geography describes the *component parts* of the earth, water and land, it tells us in what proportions these bodies respectively exist, and how they are distributed: the divisions, characteristics, depths, temperatures, productions, movements, &c., of the *water*: and the divisions, shapes, reliefs, productions, &c., of the *land*. When dealing with the *outer covering* of the earth, Geography tells us something about the composition of this envelope, its thickness, pressure, temperature, moisture, and movements. These are the topics with which **Physical Geography** is occupied.¹

When Geography describes the *artificial divisions* of the earth into countries, kingdoms, &c., the occupations, trades, commerce, governments, &c., which men have established for their collective and individual well-being, it is called **Political Geography.**

SOME GENERAL NOTIONS OF

I.—ASTRONOMICAL OR MATHEMATICAL GEOGRAPHY.

1. WHAT THE EARTH IS, ITS FIGURE, PLACE, MOTIONS, SIZE, &c.

WHAT THE EARTH IS.—The earth is a *planet*, i.e., is a heavenly body revolving round the sun. It derives its warmth and light from the sun, and is a member of the *Solar System*.

Obs. The *Solar System* consists of the *sun and his attendant planets*, including *comets and meteoric bodies*.

¹ The term *Physiography* is applied by Cortembert, Huxley, and others to the subjects which are here classed under *Mathematical and Physical Geography*.

FIGURE.—The earth is *round*, being in *shape* something like an orange.

Obs. The roundness of the earth is not immediately apparent to men : still it is both plainly indicated and has been demonstrated by actual measurements and calculations. The following are among the indications of the fact.

1. The sun, moon, and planets are round ; analogy suggests that the earth also is round.
2. The earth's shadow, as seen in eclipses of the moon, is always round ; therefore the earth must be round ; for none but round bodies always project round shadows.
3. The horizon on land—or “the offing,” as it is termed at sea—always appears in the form of a perfect geometrical circle, having the spectator at its centre. These phenomena, observable in every part of the world, are peculiar to spherical bodies.
4. When a vessel approaches land her top-masts appear first to spectators on the shore. Were the earth flat, the lower parts of the ship, being the most bulky, would be first seen. They are concealed by the curved surface of the earth.
5. Ships sailing from England and holding a continuously westward course, will in due time arrive in England again. This could not be done unless the earth were round.

PLACE.—The place of the earth among the planets is between *Venus* and *Mars*, and 93,300,000 m. distant from the sun.

MOTIONS.—The earth is *ever* in motion. It is perpetually spinning round upon itself, or *rotating about its own axis*,¹ from W. to E., and flies, at the same time, rapidly through space in unceasing *revolution about the sun*.

Obs. 1. The time occupied by the earth in rotating once about its axis is *one day* ;² hence the *rotatory* motion of the earth is called *diurnal*. The phenomena of *day* and *night*, and of the *apparent motions* of the sun and other celestial bodies from E. to W., are due to the earth's diurnal motion.

Obs. 2. The time occupied by the earth in performing *one revolution round the sun* is a *year* ;³ hence the earth's *revolutionary motion* is termed *annual*. It is to the earth's annual motion that we owe the phenomena of the *Seasons* and of the *apparent motions* of the sun among the fixed stars.

Obs. 3. Both these motions are capable of direct proof ; the *diurnal* by the vibrations of the pendulum, as shown by M. Foucault in 1851 : and the *annual* by the displacement of the position of a fixed star produced by the earth's motion combined with the motion of light.

SIZE.—If the earth were perfectly round, *i.e.*, were a perfect sphere,⁴ its various diameters would all be of the same length : but since it is orange-shaped, *i.e.*, is slightly flattened in two of its opposite parts, that diameter⁵ which lies between these compressed parts is shorter than that which is at right angles to them. Calculations based upon actual measurement have shown that the earth's *Equatorial Diameter*⁶ is 7925·6 m. long ; its *Polar Diameter*⁷

¹ *Axis*, the imaginary line about which the earth rotates.

² The exact time of the earth's rotation about its own axis is 23^h 56^m 4^s. Hence in the neighbourhood of the equator, the earth is carried round at the rate of more than 1000 m. an hour.

³ The exact time of the earth's revolution round the sun is 365^d 6^h 9^m 10^s·7. The rate at which she travels in her revolution is more than 17,000 m. an hour.

⁴ A Sphere is a solid body, every point in the

surface of which is equally distant from an interior point called the centre.

⁵ A Diameter is a straight line which passes through the centre of a curved figure, and is terminated at both ends by the sides of the figure.

⁶ The Equatorial Diameter is the straight line which passes through the earth at the equator.

⁷ The Polar Diameter is coincident with the earth's axis.

7899·2 m.; and therefore its *Mean*¹ *Diameter* is 7912·4 m. Its *Circumference* is 25,000 m.; and its *Area* 197,000,000 sq. m.

2.—EXPLANATIONS, AND DEFINITIONS OF TERMS USED IN MATHEMATICAL GEOGRAPHY.

1. CONVENTIONAL POINTS AND CIRCLES.

POINTS.—For purposes of *measurement, reference, localization, &c.*, astronomers have provided the earth with various *imaginary points and circles*. The chief of such points are the *Two Poles*, the *Four Cardinal Points*, and their *Four Collateral Points*.

The **Two Poles** are the extremities of the earth's axis. One of these, being always turned towards the N. part of the celestial sphere, is called the *North Pole*; the other, being always turned towards the S. part of the heavens, is called the *South Pole*.

The **Four Cardinal**² **Points** are the four chief points in the horizon: they are called *East, West, North, and South*.

Obs. The **East** is that point in the horizon where the sun *rises*; the **West**, that point where the sun *sets*. The **South** is that point in the horizon which is exactly *opposite* to our *faces* when we look at the *mid-day* sun. The **North** is that point in the horizon which is *diametrically opposite* to the *South*.

The **Four Collateral**³ **Points** also lie in the horizon, and *bisect* the intervals between the Cardinal Points. Those two of them which fall between the S. and E., and between the S. and W., are called respectively the *South East* and the *South West*; while those between the N. and the E., and between the N. and the W., are called *North East* and *North West*.

Obs. 1. At 6 o'clock in the morning the sun is in the E.: at 9 it is in the S.E., or midway between the E. and S. At 12 o'clock⁴ it is exactly opposite to the S. and the N. At 3 o'clock in the afternoon the sun is in the S.W., and at 6, in the W.

Obs. 2. **Maps** which represent the *surface* of the earth, or any part of it, are always so constructed as to have the N. at the *top*; the S. at the *bottom*; the E. on the *right hand*, and the W. on the *left hand*.

CIRCLES.⁵—The circles which are used by geographers are the *Equator, Meridians, Parallels, Horizon, and Ecliptic*.

The **Equator** is an imaginary circle drawn round the earth, exactly midway between the poles.

Obs. The earth is thus divided into two equal parts by the equator, one N. of it, which is called the **Northern Hemisphere**; the other S. of it, called the **Southern Hemisphere**. The equator, therefore forms the *initial circle* whence *Latitude* N. or S. is reckoned.

¹ The Mean Diameter of the earth is the diameter which the earth would have if reduced to a perfect sphere.

² The Cardinal Points are generally represented by the abbreviations E. W. N. S.

³ The Collateral Points are usually designated by the abbreviations S.E.; S.W.; N.E.; N.W.

⁴ If we look full at the sun at noon (12 o'clock), our faces will be turned towards the S., our backs towards the N., our right hands towards the W., and our left towards the E.

⁵ All Circles are regarded as being divided into 360 degrees; every degree is divided into 60 minutes, and every minute into 60 seconds. Degrees are

indicated by a small zero (°); minutes by a single dash ('); and seconds by a double dash ("). Thus 20° 15' 10" represent twenty degrees, fifteen minutes, and ten seconds.

The half of a circle, or *semicircle*, is 180°. The fourth part of a circle, called a *quadrant*, is 90°.

Since every circle, however great it may be, or however small, is supposed to be divided into 360°, it follows that the length of a degree varies in proportion to the size of the circle. It has been determined by actual measurement that the length of a degree at the earth's equator is 69 geographical, or 69·121 statute miles.

A Meridian is a circle which passes through the poles, cuts the equator at right angles, and divides the globe into two hemispheres—the eastern and western.

Obs. These circles are called *meridians* or *mid-day circles*, because they pass through every place which has mid-day, or noon, at the same instant. There are 24 such meridians usually described upon artificial globes, and they are placed at intervals of 15°, and each such interval represents *one hour* of time.

The Parallels are circles drawn parallel to the equator.

Obs. 1. All those places on the earth's surface which are due E. and W. of one another are on the same parallel. But all those places which are situated at different distances from the equator, or N. and S. of one another, have different parallels. Virtually, therefore, there is *no limit* to the number of parallels.

Obs. 2. Four of the parallels occupy definite positions on the globe, and are distinguished by special names. These are—

- a. The **Tropic¹ of Cancer**,² which lies 23° 28' N. of the equator.
- b. The **Tropic of Capricorn**,³ which lies 23° 28' S. of the equator.
- c. The **Arctic Circle**,⁴ which lies 23° 28' from the N. pole.
- d. The **Antarctic Circle**,⁴ which lies 23° 28' from the S. pole.

The Horizon is a circle of the celestial sphere which separates its visible from its invisible part.

The Ecliptic is a circle of the sphere which the sun appears to describe in a year, but which is really described by the earth in that time.

Obs. 1. Strictly speaking, the **Horizon** and **Ecliptic** belong to the *Celestial Sphere*, and are *Astronomical* rather than *Geographical*.

Obs. 2. The **Ecliptic** is so called from the fact that *eclipses* of the sun or moon can only occur when the latter is on or very near this circle.

Obs. 3. When the **Ecliptic** is spoken of in connection with geography, it is a great circle on an artificial globe which cuts the equator at an angle of 23° 28' in two diametrically opposite points, that is meant. It represents the successive parallels at which the sun is vertical during the earth's annual revolution.

Obs. 4. Connected with the Ecliptic are *The Equinoxes*, *The Solstices*, and *The Zodiac*.

The Equinoxes are the points of intersection of the ecliptic and the equator.

The sun occupies these points *twice* in the year, viz., at the *vernal* or *spring equinox* (about 21st March); and at the *autumnal equinox* (about 23rd September). At these epochs night and day are of *equal* duration over nearly all the earth.

The Solstices are the positions occupied by the *Sun* when it is *most remote* from the equator. These positions are called *Solstices*, because the sun, having reached them, seems, during a few days, to remain *stationary*. There are *two* solstices in the year, viz., the *summer solstice* and the *winter solstice*, which begin, respectively, about the 21st June, and the 21st December.

The Zodiac⁵ is a belt in the celestial sphere, which extends about 9° on each side of the ecliptic, and within which the chief planets perform their revolutions.

2. LATITUDE AND LONGITUDE.

Latitude is the term applied to the earth's extension N. and S. of the equator.

¹ The Plane of the Ecliptic, or sun's apparent path in the sky, makes an angle of 23° 28' with the plane of the equinoctial. Therefore in the course of its annual revolution the sun appears to cross and recross the equinoctial, travelling southwards and northwards alternately until it reaches 23° 28' S. and N. of the equinoctial respectively. These extreme points, or rather the circles which pass through them, are called **Tropics**, because the sun, having reached either of them, then turns in a new direction.

² Cancer and Capricorn are two signs of the zodiac which the sun enters at the summer and

winter solstices respectively.

³ Arctic is synonymous with *northern*, from the nearness of the two constellations, the Great and Little Bear, to the North Pole Star.

⁴ Antarctic merely means *opposite the bear, or south*. The Arctic and the Antarctic circles are the circles described by the poles of the ecliptic during the earth's diurnal rotation.

⁵ The **Zodiac** was so called because most of the constellations which occupy its 12 divisions of 30° each were represented by the *figures of animals*.

Longitude is the term applied to the earth's extension E. and W. of the first Meridian.

Obs. 1. The terms **Latitude** and **Longitude** were adopted into the science of geography before the sphericity of the earth had been demonstrated, and while it was yet thought that the extension of the earth was greater in the direction of E. and W. than in that of N. and S. And as men always apply the term *breadth* to the least dimension of any superficies, and the term *length* to the greatest, the term *breadth*, or *Latitude*, came to be applied to the N. and S. extension of the earth's surface; and the term *length*, or *Longitude*, to its E. and W. extension. As applied to *spherical* bodies, these terms are inappropriate, for spheres cannot properly be considered longer in one direction than in another: yet they keep their ground, and we still go on applying the names.

Obs. 2. The **Equator** forms the line from which latitude is reckoned: it also divides the earth's latitude into two equal parts, each of which extends from the equator to one of the poles—a space of 90°. The space on the N. side of the equator is called **North Latitude**; that on the S., **South Latitude**. The position of any place with respect to the equator is so many *degrees, minutes and seconds*, in N. or S. latitude.

Obs. 3. We may know the *latitude* of a place on the earth's surface, and yet not have any definite notion of the exact position of the place. For suppose a place to be in 50° N. lat., upon what particular spot of the 50th parallel shall we seek it? This difficulty is overcome by selecting *some one* of the various meridians which surround the earth at right angles to the equator, calling it the *first meridian*,¹ and referring the situations to it, as being so many degrees, &c., E. or W. of it. This meridian divides the earth's longitude into two equal parts, each of which—embracing half the circumference of the globe—extends 180°. One of these divisions is called **East Longitude**, the other **West Longitude**. Longitude is usually reckoned² from 0° to 180° E., and from 0° to 180° W.

II.—PHYSICAL GEOGRAPHY.

WHAT IT IS.

Physical Geography describes the earth as the abode of man. It treats of the *distribution, position, climate, natural productions, &c.*, of the water- and land-masses which constitute the earth's surface.

Obs. In its highest development as a science physical geography also compares, interprets, and investigates the *how* and the *wherefore* of the phenomena which it describes.

The entire surface of the earth consists of **Water and Land**.

1. WATER.

PROPORTION OF.—The great world of waters forms nearly *three-fourths* of the Earth's surface.

Obs. The area of the earth's surface is estimated at about 197,000,000 sq. m.; the *water surface*, variously, at from 137,000,000 to 144,712,850 sq. m.

DISTRIBUTION AND DIVISIONS OF.—This great portion of the earth's surface constitutes what is commonly called *the Sea*. The

¹ As all meridians are exactly the same length, and of equal importance, there is no reason why any particular one should be chosen for first meridian. It thus happens, very unfortunately, that *different nations* reckon longitude from *different first meridians*, e.g., the English reckon from the meridian of *Greenwich*; the French from that of *Paris*; the Germans from that of *Berlin*; and the Spaniards from that of *Cádiz*;

&c., &c. In the 17th and 18th centuries, *all nations* reckoned from the meridian of *Ferro*, one of the Canary Isles.

² Longitude is also reckoned in *Time*, at the rate of 1° for 4 minutes, or 15° for an *hour*. By this reckoning, *Paris*, e.g., is 9° 20' 5" E. of *Greenwich*. By the ordinary reckoning, it is 2° 20' 25" E. long.

sea is, naturally, one and indivisible. But the land, distributed among the waters as it is, partially encloses portions of them; and these enclosures together with the open waters immediately connected with them are called *Oceans*. Of such oceans there are five, viz. the *Pacific, Atlantic, Indian, Arctic, and Antarctic Oceans*.

Obs. The **Pacific¹ Ocean**—called by the Germans and French “The Great Ocean,” and sometimes (improperly) by ourselves “The South Sea”—covers more than a third part of the surface of the globe. It *extends* from the Arctic circle on the N. to the Antarctic circle on the S., and from Asia and Australia on the W. to America on the E. The equator divides it into the N. and S. Pacific Oceans. It is the largest and calmest of the oceans, but not the most important.

The **Atlantic Ocean** is the most important, the best known, the deepest, and the stormiest of all the oceans. It *extends* from the Arctic circle on the N. to the Antarctic circle on the S., and from the Old World and the 20th meridian E. on the E. to the New World, and the 67th meridian W. on the W. The equator divides it into the N. and S. Atlantic Oceans.

The **Indian Ocean**—so called because its waters wash three sides of the Indian Peninsula—*extends* from Persia and Hindustan on the N., to the Antarctic circle on the S.; and from Australia on the E., to Africa and the Atlantic Ocean on the W. The waters of the Indian Ocean have a higher *temperature* than those of the other oceans, and consequently the *evaporation* from them is more abundant.

The **Arctic Ocean**—called also the “Polar” and the “Frozen Ocean”—coincides, for the most part, with the N. Frigid Zone, and is nearly circular in form. It is connected with the *Atlantic* by a broad passage between Norway and Greenland; and with the *Pacific* by the narrow strait of Behring. These openings lie nearly on opposite sides of the circle which encloses the Arctic Ocean. The various connections between these oceans W. of Greenland are generally ice-bound.

The **Antarctic Ocean** comprises the whole body of water which lies S. of the Antarctic circle, and coincides with the S. Frigid Zone. Its waters are continuous with those of the Pacific, Atlantic, and Indian Oceans; but they have, as yet, proved to be inaccessible beyond 58° 4' S. lat., owing to their numerous and stupendous icebergs, their extensive fields of pack-ice, and to the tempestuous and freezing winds which blow over their surface.

MOVEMENTS OF.—The sea is never still; its waters are in ceaseless motion; ever passing from the equator towards the poles, and from the poles towards the equator; ever sinking down to the depths below and rising to the surface above; ever ebbing and flowing as tides; ever oscillating to and fro as billows and waves.

Obs. The **vital movements** of the sea are carried on by *currents*, or oceanic rivers, which transport enormous masses of water thousands of miles wide and hundreds of fathoms deep, across the ocean basins and distribute them successively over every part of the globe.

Currents are formed by differences of level produced on the surface of the sea, whether by winds, or rains, or evaporation: for water, ever seeking its own level, always flows from the higher to the lower tracts. But the *Grand Currents* upon which the constant circulation of the whole mighty mass of water mainly depends, and which travel with regular motion between the equatorial and polar regions, are due to the *Sun's heat*, and the *diurnal rotation* of the earth.

By the *Sun's heat* vast masses of water in the equatorial regions are transformed into vapour which, ascending into the atmosphere, is condensed into clouds. The great void thus formed is filled up by waters from the polar basins, where the contributions of rain, snow, and ice, exceed the loss by vapour. The continuous flow of this excess of water from the opposite poles towards the equator, constitutes the *two great currents* which meet one another in the Pacific and Atlantic Oceans. The progress of this mighty oceanic current is accelerated by the trade winds which, always blowing in the same direction, drive the waves before them.

By the *earth's rotation on its own axis* the waters flowing from the polar to the

¹ The Pacific Ocean was so called by Magellan who, on first entering this sea, enjoyed an uninterrupted succession of fair weather, which con-

trasted very favourably with the heavy gales that he had encountered in the Straits of Magellan.

equatorial regions, traversing latitudes whose rotatory speed is greater than their own, are constantly drawn obliquely towards the W.; and this continual retardation of their motion behind that of the earth's rotation becomes, in relation to the surface of the sea, an apparent motion from E. to W. These polar currents, travelling with this side movement, meet in the tropics, strike each other obliquely, coalesce, and form a great *equatorial current* which flows towards the W. in the opposite direction to that of the earth.

The other *oceanic rivers* are branches from these two *polar* and their resulting *equatorial currents*. They are caused by the obstructions of the continents. Opposed in the Pacific by Asia, Australia, and the intermediate Archipelago, and in the Atlantic by America, the equatorial current is thrust partly to the N. and partly to the S. in the direction of the poles. In the Pacific the N. branch forms the warm and powerful *Japanese current* called *Kuro-Sivo* (=Black Water) from its dark blue colour. In the Atlantic the N. branch forms the mighty *Gulf Stream* of which Maury (Phys. Geog. of the Sea, p. 22) says, "there is in the world no other such majestic flow of waters. Its current is more rapid than the Mississippi or the Amazon, and its volume more than a thousand times greater."

In describing their courses round the different oceans these five *primary currents* send off many branches which, for the most part, are named from the coasts along which they flow, e.g., in the

Pacific there are the E. and S. *Australian*, the *Mexican*, and *Peruvian* currents. *Atlantic*, the *Brazilian*, and *Guinea* currents.

Indian Ocean, the *Agulhas*, *Mozambique*, and *Malabar* currents. All these are *Stream Currents*, or powerful ocean rivers, which force their way through the surrounding waters, maintain uniform directions, and undergo but little modification from the action of winds.

There are also *Drift Currents* which are caused by the operation of the prevailing winds on the surface of the ocean.

Obs. 2. Tides are the daily risings and fallings of the waters of the ocean caused by the attraction of the Sun and Moon upon them. When the tide is *rising* or *flowing* it is called "flood-tide"; when it is *falling* or *receding* it is an "ebb-tide." About the times of new and full moon, the tides attain their *maximum height* and are then called "spring-tides." The comparatively low tides which occur near the times of the first and last quarters of the moon are called "neap-tides."

Obs. 3. Waves are moving swells, or volumes, of water which are raised and driven by the wind: *Billows* are great waves swelled by storms.

DEFINITIONS OF TERMS CONNECTED WITH THE WATER.—In *penetrating and encroaching* upon the land, the ocean forms *Seas, Gulfs, Bays, Bights, Havens, Harbours, Ports, Creeks, Roads, Firths, Estuaries, Lagoons, &c.*

A **Sea** is, *literally*, a large collection of water; *geographically*, a branch of an ocean more or less inclosed by land, e.g., the *Baltic Sea*, *North Sea*, &c.

A **Gulf** is a wide space of sea penetrating far into land, e.g., the *Persian Gulf*.

A **Bay** is a bend or hollow in the line of coast, e.g., the *Bay of Naples*.

A **Bight** is a bend in the coast forming an open bay, e.g., the *Bight of Benin*.

Havens, Harbours, and Ports are indentations in the coasts which afford shelter to ships.

A **Creek** is a corner, or bend, in the shore of the sea. Creeks are also called *Coves*.

A **Road, or Roadstead**, is a place at sea, more or less sheltered from winds and currents, where ships can *ride* at anchor, e.g., the *Yarmouth Roads*.

A **Firth**¹ or **Frith** (=Scandinavian "Fjord") is a narrow inlet of the sea; especially at the mouth of a river.

An **Estuary**² is a channel which extends inland from the sea, but is filled with water only at flood-tide.

¹ The terms *Firth* or *Frith* are peculiar to Scotland. In Denmark and Scandinavia the same kind of inlet is termed a *Fjord*.

² In Scotland estuaries are called "*Firths*," and sometimes "*Lochs*."

A Lagoon,¹ or Lagune, is a shallow salt-water lake close to the sea, which is formed by the overflow, or infiltration, of the sea.

In forcing their way between two portions of land, the waters of the ocean form *Straits, Channels, and Sounds*.

A Strait is a narrow passage in the ocean between two bodies of land, *e.g.*, the *Strait of Dover*.

A Channel is a long and wide strait *e.g.*, the *English Channel*. Also a passage leading from the sea to the mouth of a river, *e.g.*, the *Bristol Channel*.

A Sound is a narrow arm of the sea between the mainland and islands.

Those waters which fall upon the earth as rain and snow are either gathered together and stored up in *Lakes, Ponds, and Glaciers*, or are immediately transmitted back again to the sea by *Rivers*.

A Lake is a mass of water, more or less extensive and deep, contained in some natural depression of the earth's surface.

Obs. 1. As **drainage agents**, lakes perform functions of great importance, for they receive and store up, and then distribute gradually, waters which may be at any time surplus; and which would, but for them, run off to waste, bearing with them in many instances devastation and ruin.

Obs. 2. Lakes, according to the manner in which they receive and discharge their waters are distinguished into four kinds, viz. :—

a. Lakes of reception, which receive a river or rivers, but have no visible outlet. Their waters are kept from overflowing by evaporation; perhaps also by percolation and subterraneous escape. These lakes are often large and their waters salt: *e.g.*, the *Caspian Sea*.²

b. Lakes of emission which have an outlet or outlets, but receive no running waters. They are occasionally sources of large rivers.

c. Lakes of transmission, which both receive and emit rivers. The most numerous and important lakes belong to this class; *e.g.*, the great *American lakes*,³ the *Swiss and Italian lakes*, and the *British lakes*.

d. Lakes which neither receive nor emit rivers. These derive their waters from rain and from subterraneous springs, and discharge them by evaporation and probably by subterraneous channels.

Obs. 3. The basin of a lake embraces all the land which is drained into it, and is bounded, therefore, by an imaginary line drawn through the sources of its various feeders.

A Pond is a body of stagnant fresh water shut in, or devoid of outlet. It is usually smaller than a lake.

A River is a great stream of water which generally rises amongst mountains, receives into its bosom a number of smaller tributary streams, and finally falls into the sea or into some lake.

Obs. 1. The various parts of a river are its *source, mouth or embouchure, bed, banks, tributaries or affluents, confluents, confluences, basins, and sub-basins*.

The *source*⁴ of a river is the spring, fountain, glacier, or lake, in which that tributary of a river which is most remote from its mouth originates.

The *mouth*⁵ or *embouchure* of a river is the line of junction of its waters with those of the sea.

The *bed* of a river is the channel in which its waters flow.

Note. The beds of rivers are subject to various *inequalities*, which, in places take the form of deep precipices. When a *great* river bounds over one of these,

¹ The term "Lagoon" is also applied to the waters enclosed by coral reefs in the open sea.

² The Caspian is the largest lake in the world.

³ Lake Superior, in N. America, is the largest body of fresh water in the world.

⁴ It is not strictly accurate to talk about the source of a river, inasmuch as all rivers are

formed by the combination of the innumerable rills which collect the drainage of the entire basin.

⁵ Those rivers which enter the sea by two or more mouths, often include between their diverging branches a triangular piece of land, which is called a Delta, *e.g.*, the *Delta of the Nile*.

its fall forms a cataract: if the river be *small*, the fall forms a *cascade*. The flow of the river over *small* inequalities of bed forms *rapids*.

The banks of a river are the margins of land which touch the water on either side.

Note. A river's banks are distinguished as *right* or *left* according as they lie on the right hand or the left of a person who may be supposed to be descending from the source towards the mouth of the river.

Affluents or tributaries, are smaller streams which flow into large rivers.

A **confluent** is a river which flows into the same estuary with another.

A **confluence** is the junction of two rivers.

A **river-basin** is the whole tract of land which is drained by a river and its tributaries.

A **sub-basin** of a river is a tract of land which is drained by a tributary and its affluents.

Note. River-basins are separated from one another by ridges of elevated ground called *water-sheds*.¹ The separating ridges of sub-basins are called *secondary water-sheds*.

Obs. 2. A *canal* is an artificial river constructed for purposes of *navigation*, *irrigation*, or *drainage*.

2. LAND.

PROPORTION AND DISTRIBUTION OF.—A little more than a *fourth part* of the earth's surface consists of land.

Obs. The land surface is variously estimated at from 52 to 60 millions of square miles. By far the greater part of the land is embodied in two huge, unequal, and independent masses called *Continents*. The largest of these masses, termed the *Old Continent* or *Old World*, extends towards the N.E. and S.W.: the smaller, called the *New Continent*, or *New World*, is separated from the Old World by the Atlantic on the E., and by the Pacific on the W., and stretches from N. to S. The remaining land is scattered about in the Pacific, Arctic, and Antarctic Oceans. The Atlantic and its various arms contain but a few small islands.

DIVISIONS.—The old continent comprises *Europe*, *Asia*, and *Africa*; the new continent, *North*, *Central*, and *South America*. In the Pacific Ocean lies *Australasia*; in the Arctic Ocean, *Greenland*; and in the Antarctic Ocean, the *Antarctic Lands*.

Obs. The lands in the Arctic and Antarctic Seas are, as yet, but imperfectly known.

DEFINITIONS OF TERMS CONNECTED WITH THE LAND.—According to their extent land-masses are called *Continents* and *Islands*.

Continent, a vast *continuous* mass of land surrounded by sea.

Obs. Strictly conforming to this definition there are only *two continents*, the old and the *new*. Geographers, however, generally apply the same denomination to the *great component parts* of the principal masses, and to the large island *Australia*. It arises hence that Europe, Asia, Africa, North America, South America, and Australia, are spoken of and described as continents.

Island, a spot of land surrounded by water, *e.g.*, *England*, *Sicily*.

Obs. A *small* island in the sea is called an *Ialet*; in a river, an *Eyot*. Several islands *situated close together* form a *Group* or *Archipelago*.

Large portions of land which are nearly detached by sea from their parent masses give rise to the terms *Peninsula* and *Isthmus*.

¹ What are here called *Water-sheds* are denominated by Lavalée, K. Johnston, and others *Water-partings*. These and other geographers

apply the term "*Water-shed*" to the slope between the *Water-parting* and the *Water-course*. (Lavalée's *Geography* by Leudy, p. 7, notes).

Peninsula, a mass of land almost surrounded by water, *e.g.*, *Italy, Spain, &c.*
Isthmus, a strip, or neck, of land which connects two larger portions of land, *e.g.*, the *Isthmus of Suez*.

The various *natural features* exhibited by the *line of contact* between the *Continents* and *Oceans* are distinguished by the terms *Coast, Shore, Cape, &c.*

Coast, the *side or border of land* next the sea.

Shore, the *dividing line* between the water and land: the land *adjacent* to the sea, a river, or lake.

Obs. The *shores or margins* of oceans, seas, lakes, and sometimes of large rivers, are called **Strands**, *cf.* "The Strand." The border or shore of the sea is called the **Sea-board**. That part of the *sea-shore* which is *overflowed by the tide* is called the **Beach**. In places the coastline consists of rocks with *steep faces* turned towards the sea. These are **Cliffs**.

Cape, a *head, or point*, of land jutting into the sea; a *headland*.

Obs. Capes are often distinguished by *local names*, as **Head, Point, Ness, Nose, Bill**, and **Mull**. *Lofty and precipitous capes* are called **Promontories**.

The *inequalities* of the earth's surface are denominated by the terms *Mountain, Hill, Table-land, Plateau, Highland, Plain, Low-land, Valley, Basin, &c.*

Mountain, a heaped up mass of the earth's surface which towers above the adjacent district to a height of 2000 feet and upwards.

Obs. 1. The *highest part* of a mountain is called its **Summit** or **Top**; the *lowest part* its **Foot** or **Base**; and the *sides* its **Flanks**. *Pointed mountains* are termed **Peaks**; mountains with *flat tops*, **Table-mountains** and **Kulms**. When mountain flanks are more or less *inclined* they form **Slopes**; when they are nearly *vertical* they form **Escarpments** and **Precipices**.

Obs. 2. When such elevated masses of surface are much *prolonged* in any direction they form **Mountain Ranges**. Mountain ranges, again, throw out *transverse ranges*, which, if long, are called **Branches**; if short and abrupt, **Spurs**. The line of *greatest elevation* of the range forms the **Crest**, and the *highest point* in the crest is called the **Culminating Point** of the range. *One side* of a mountain range generally consists of a *long and gradual incline* called the **Slope**; the *opposite side*, of a *shorter and steeper* one called the **Counter-slope**. A series of ranges forms a **Mountain Group**, and a *number of groups* form a **Mountain System**. The *central mass* from which such systems often radiate is called a **Mountain Knot**.

Obs. 3. A *series of elevations*, having their bases united and their axes continuous throughout some extent of country, forms a **Mountain Chain**.¹

Sudden depressions occurring near these elevations and serving for *passages* from one side to the other are called **Passes**² and **Defiles**.

Obs. 4. Some mountains reach a great height and stand upon extensive bases, but form no part of any true *mountain system*. Even when they lie close together, if they have no inner principle of unity, they are not considered to make either *chains or ranges*, but are called **Mountainous Districts**.

Obs. 5. To districts of this kind belong many **Volcanoes** (*e.g.*, *Vesuvius, Etna, &c.*), openings, that is, in the crust of the earth through which solid substances of various kinds are ejected in a state of igneous fluidity from unknown depths to the surface. Such substances issue from these openings as *streams of lava, or scorice, or ashes*.

Volcanoes, generally assume a *conical shape*, having at their summits *hollows* called **Craters**.

Those volcanoes which are in an *incessant state of eruption*, as *Stromboli*, are called **Active**. Those which have longer or shorter *periods of repose*—as *Vesuvius*—are called **Intermittent**. While those of which there is *no recorded instance of activity*—as the *Mountains of Auvergne*—are said to be **Extinct**.

¹ Many writers on geography use the terms *Range* and *Chain* as synonymous.

² Among the Alps, *Passes* are called by the names *Col, Pas, Joch, &c.*

Some volcanoes vomit *streams of mud*; others *jets of hot water*; and others again *sulphur and various vapours*. These are called respectively **Sales** or **Mud Volcanoes**; **Geysers**, and **Solfataras**.

Intimately connected with volcanoes are **Earthquakes** (shakings or quakings of the earth).

Hill, an upheaved mass of the earth's crust which does not rise so much as 2,000¹ feet above the level of the adjacent district.

Obs. **Hillocks** are small hills. **Knolls** are round hillocks. **Dunes** are hills of blown sand, such as are often found on the sea-shore. The rounded turf-covered chalk-hills of the S. of England are called **Dowas**. **Mounds** are *artificial* hillocks. **Tor** and **Cop** are English local terms for a high and pointed hill. Conspicuous hills in England, which have been used in times past as stations for danger-signals, are called **Beacons** and **Lews**.

Plateau or Table-land, an extent of land raised to a considerable elevation above the sea, and presenting a surface more or less uniform.

Obs. When table-lands of different elevations are connected together, they are termed **Terraces**.

Highland, a region composed of irregular elevations separated by valleys.

Lowland, a region which is depressed with respect to the neighbouring country.

Plain, a region of country generally devoid of elevations or depressions.

Obs. In different countries the leading characteristics of the *great plains* are, more or less, indicated by the appellations which they bear, *e.g.*

The *sandy heath plains* in S.W. France are called **Landes** (lit. sandy grounds).

The *vast treeless plains* of Russia are called **Steppes** (lit. barren plains).

The *tropical and sterile plains* of Asia and Africa are called **Deserts** (lit. forsaken, untilled plains).

The *grassy plains* of N. America are called **Prairies** (lit. meadows).

The *wet plains* of N. America are called **Savannahs** (lit. snow-covered plains).

The *forest plains* of S. America are called **Selvas** (lit. forests).

Valley, an elongated depression in the earth's surface bounded by hill-, or mountain-ranges, open at its lower end, and generally traversed by a river.

Obs. 1. Valleys are usually named from the rivers which flow through them, *e.g.*, the *Valley of the Thames*, the *Valley of the Nile*, &c.

Obs. 2. When the depression between the bordering mountains is *narrow* and *deep* it is called a **Glen**, **Ravine** or **Gorge**.

Obs. 3. The valleys between the Scotch mountains are called **Straths**, **Dales**, **Carses**, &c., *e.g.*, *Strath-more*, *Clydes-dale*, *Carse of Gowrie*, &c.

3. THE ATMOSPHERE.

THE ATMOSPHERE (*vapour-sphere*) is the great sea of air which surrounds the earth, and at the bottom of which we live and move.

Obs. This sea of air is held in its place by the earth's attraction, and it clings so closely to the planet that it is carried along with it in both its diurnal rotation, and its annual revolution.

COMPOSITION OF.—The atmosphere consists of two gases, **nitrogen** and **oxygen**, which are mechanically mixed together in the proportions, by *volume*, of 79 per cent. of the former to 21 of the latter; or, by *weight*, of 77 and 23 parts per cent. respectively.

Obs. The air also holds in suspension many other substances, the chief of which are *carbonic acid gas*, and *vapour of water*. In every 1,000 volumes of air of ordinary purity there are always present from 3 to 4 volumes of carbonic acid gas, and from 4 to 16 volumes of *watery vapour*.

¹ Keith Johnston, in his "Physical Geog." p. 11, says that the term **Hill** "is generally limited in its use to all heights below 1,000 feet in elevation."

Though present in such comparatively minute proportions, it is scarcely possible to exaggerate the importance of these two gases; for from the carbon of the air is derived all the woody fibre and all the nutriment of the vegetable world, while from the watery vapour arises all the circulation of water which takes place on the land—viz., rain, springs, streams rivers, and lakes,—and all the winds, storms, and tempests.

HEIGHT OF.—It is not known exactly how high the atmosphere extends; but as compared with the size of the earth it forms only a very thin layer.

Obs. From many observations on the refraction of light, it was long thought that the atmosphere did not extend more than 45 m. above the level of the sea. Recent observations, however, on *luminous meteors* have led to the supposition that it may be at least 120 m. high.

PRESSURE OF.—The atmosphere presses equally upon every part of the earth's surface with a mean force, at the level of the sea, of 14.75 lbs. per square inch.

Obs. 1. The force of the atmospheric pressure can everywhere be measured by the *Barometer* (*weight measure*) the principle of which is that the weight of a column of air will balance the weight of a column of any other fluid, the height of such column varying with the specific gravity of the fluid used.

Obs. 2. Experiment has proved that the lowest layers of the atmosphere are the densest, and that the pressure continuously decreases upwards in geometrical ratio.

Obs. 3. The pressure of the atmosphere is liable to changes at all heights; and such changes, often sudden and violent, are followed by changes of weather, often by winds and storms.

Obs. 4. On *Weather-maps* it is customary to join together all those places on the earth's surface which are known to have, at a given time, the same barometric pressure by *Isobaric lines* (*lines of equal weight*).

TEMPERATURE OF.—The atmosphere derives its temperature directly from the earth; indirectly, from the sun.

Obs. 1. Dry air, being almost perfectly diathermanous, transmits luminous solar heat without being sensibly warmed thereby: on the other hand, it readily absorbs the obscure heat radiated from the ground, and its absorbing power is greatly increased when watery vapour is present.

Obs. 2. The surface of the earth receiving the sun's rays in almost undiminished intensity absorbs them, and becoming warm imparts that warmth to the air which rests upon it.

Obs. 3. As air expands with increase of heat and becomes lighter, the layer in immediate contact with the earth, being warmed, ascends and gives place to the colder and heavier air which presses upon it from above: and this process of vertical circulation continues until equilibrium is established between the temperature of the earth, and that of the air in contact with it.

Obs. 4. The temperature of the atmosphere is nowhere either constant or uniform. It diminishes vertically in proportion to its height above the earth, and laterally in proportion to its distance from the Equator. It is higher during the day than during the night; and in summer than in winter. It is also varied by the distribution of sea and land, by winds and currents, and by the ever changing quantity of watery vapour.

Obs. 5. The variations of the temperature of the atmosphere are measured by *Thermometers* (*heat measures*).

Obs. 6. On maps constructed to show the general distribution of temperature over the earth's surface, all those places which have the same mean temperature are connected together by lines called *isothermal lines* (*lines of equal heat*).

MOTIONS OF.—The motions of the atmosphere result from differences of its temperature, which cause differences of pressure: such disturbances give rise to a circulation of air (*ante, Obs. 3*), which,

according to its force, is called a *Breeze, Wind, Gale, Storm, Tempest, Hurricane, &c.*

Obs. 1. The equatorial regions of the earth which form the tropical zone, are the great birth-place of the winds. The high temperature throughout this zone creates a constant and rapid evaporation of water from the ocean, and so warms the lower strata of the atmosphere that there ensues a continuous ascent of heated and moist air into the higher regions, where it divides into two currents which turn respectively N. and S. towards the poles, and a corresponding influx of colder air from the temperate and frigid zones N. and S. of the equatorial belt forming under or surface currents which flow towards the Equator.

Obs. 2. A *Breeze* is a light wind. In the vicinity of the ocean the daily winds, which blow from and towards the sea alternately, are called *sea breezes* and *land breezes*, respectively. Sea breezes blow during the day; land breezes, during the night.

Obs. 3. A *Wind* is a current of air moving with a speed of from 10 to 40 m. an hour. Winds are classified as *Constant, Periodical, Variable, Local, &c.*

Constant Winds are the cardinal currents of the air, originated by the heat of the equatorial regions; a great system of upper currents always moving from the equator towards the poles, and of lower currents pressing in towards the equator from the poles. The chief of them are the *Trade Winds*.

The *Trade Winds*—so called by early navigators because, from their always blowing in one direction, they could be counted on for trade purposes—prevail within, and for some degrees N. and S. of, the Torrid Zone. On the N. of the Equator they blow from the N.E., and so are called the *N.E. Trade Winds*; those on the S. blow from the S.E., and are called the *S.E. Trade Winds*.

Periodical Winds are modifications of the Trade Winds, brought about by the interference and relative positions of large masses of land. The most important of these are called the *Monsoons* or *Season Winds*.

The *Monsoons*—so called from an Arabic word meaning any *season* of the year—prevail chiefly about the N. part of the Indian Ocean, where from October to April they blow from the N.E., and from April to October, from the S.W. The winter, or N.E. Monsoon is caused by the effect of the S. summer upon the great African Deserts: the summer or S.W. Monsoon by the effect of the N. summer upon the lands of S. Asia.

Variable Winds are those changeable winds which are experienced in the higher latitudes of the N. and S. hemispheres. Although the causes and operations of these winds are somewhat obscure and partial, observation shews that they do nevertheless follow some general law; for in the N. hemisphere such winds blow chiefly from the S.W., while in the S. hemisphere they are mostly from the N.W.

Local Winds are such as prevail in different countries, and in different parts of the same country, and to which local names have been applied. They are classified as *Hot Winds* and *Cold Winds*.

Hot Winds are those which have their origin in and around hot desert regions like those in Asia, Africa, and Australia. The best known of them are

1. The *Simeon* (*hot, poisonous*), a scorching and suffocating wind which has its origin in the great African Desert. At times it drives before it dense clouds of sand capable of overwhelming and burying whole caravans of travellers. It is known in Italy as the *Sirocco*, a hot, moist, and distressingly enervating wind; in Turkey it is called the *Samiel*; in Spain, the *Solano*; in N.E. Africa it is known as the *Khamsin* (*fifty*), because it blows for 50 days; and in N.W. Africa, as the *Harmattan*.

2. The *Föhn*, a hot wind which occasionally blows in Switzerland.

Cold Winds are, for the most part, modifications of the cardinal winds, altered by their passage over lofty and cold districts, which have deprived them of their warmth and moisture. The most common of these winds are

1. The *Puna Winds*—so called from the tableland of Puna, on the Plateau of Peru, where they have their origin—a branch of the S.E. trade winds which blows for four months of the year from the snowy Cordilleras. They are extremely dry and bitterly cold.
2. The *Pampero*, a branch of the N.W. trade winds which blows over the Pampas of Buenos Ayres as a violent and extremely arid W. wind.
3. The *Mistral*, a stormy and violent wind which prevails in S.E. France.
4. The *Galeo*, a strong N.W. wind which prevails in Spain.

5. The **Bora**, a tempestuous N.E. wind which is chiefly felt about the head of the Adriatic.

Obs. 4. A **Gale** is a strong wind moving at 40 m. and upwards per hour. Any wind may rise into a gale; but such winds are *prevalent* for a few days about the times of the *Equinoxes*—the 21st March and the 23rd September—and are called *Equinoctial Gales*.

Obs. 5. A **Storm** is the name given to winds which are travelling at a speed of 60 m. an hour and upwards. When the speed reaches 80 m. an hour, the storm becomes a *tempest*; at 90 m. and upwards, a *hurricane*, the path of which is marked by devastation and ruin.

MOISTURE OF.—Moisture in the form of invisible vapour, is one of the constant ingredients of the air. It is derived by evaporation from the surface of the water and land of the globe. The capacity of the atmosphere for moisture increases with increase of heat, and decreases with loss of heat. Moisture is continuously absorbed until the atmosphere is saturated, or can hold no more; the vapour is then condensed or turned into water again, and appears as *Dew, Mist, Fog, Cloud, Rain, Snow, and Hail*.

Obs. 1. **Dew** is vapour wrung out of the air and condensed into visible drops of water. When the sun has withdrawn and the sky is clear, the earth rapidly gives off by radiation the heat which it has acquired during the day, and soon becomes so cold that the air resting upon it is chilled, and unable any longer to retain all its moisture; the portion of moisture let go is condensed into water, and appears as dew. The temperature at which condensation occurs is called the *dew point*, or *point of saturation*.

Obs. 2. **Mist and Fog** are vapour of the atmosphere condensed into very minute particles and rendered visible. They occur whenever masses of warm and moist air come into contact with colder air, or in any other way have their temperature reduced below their dew point. Dew, mist, and fog are formed upon or near the earth's surface.

Obs. 3. **Clouds** are masses of mist which are formed by condensation in the upper parts of the atmosphere, where they float about instead of resting on the ground. Their formation is similar to that of mist: an ascending current of warm moist air rising high above the earth comes into contact with colder air, has its temperature chilled down to its dew point and part of its moisture condensed into clouds. Clouds are distinguished according to their *form* as *Cirrus, Cumulus, Stratus, and Nimbus*.

The **Cirrus** or **Curl Cloud**, is a light fleecy cloud and takes its name from the graceful curling form which it assumes. These are the highest of all clouds and, therefore, the lightest. They are said to consist of very fine snowflakes, or of minute particles of ice.

The **Cumulus** or **Summer Cloud**, is the massive fleecy cloud which in rounded and fantastic shapes occupies the lower skies. It is mostly formed in the morning, continues to increase and ascend during the day, and disappears towards evening.

The **Stratus** or **Fall Cloud**, is the heavy cloud-bank formed on the horizon at nightfall. It disappears with approaching day, or else becomes permanent and passes into rain cloud.

The **Nimbus** or **Rain Cloud** is a low leaden-hued cloud which is formed from a combination of the cumulus and stratus, and consists of a mass of condensed moisture ready to fall.

Obs. 4. **Rain** consists of drops of water formed by the union of the minute particles which constitute the clouds, and falling to the earth because, from their weight, the air can no longer support them. It is, in fact, the result of continuous condensation of the watery vapour of the air by contact with colder bodies. Much the greater part of the vapour of the atmosphere falls to the earth as rain, which in different parts is *periodical, or variable, or constant*.

Periodical Rains take place in the tropics where the year is divided into two equal parts, viz., a rainy and a dry season. During the dry season no rain falls; and in the wet season rains are not continuous; they fall heavily for four or five hours in the afternoon, but never during the night.

Variable Rains occur in the temperate zones, where they fall at all periods of the year; but in the N. hemisphere most copiously in winter.

Constant Rains, accompanied by frequent thunderstorms, are characteristics of the zone of equatorial calms and variable winds.

Obs. 5. **Snow** is vapour of water which has been frozen by contact with an atmosphere cooled down to 32° Fahr. It consists of tiny spikes of ice symmetrically arranged. Snow falls for the most part only in winter. Connected with snow are the *Snow-line*, *Snow-fields*, *Avalanches*, *Glaciers*, and *Icebergs*.

The *Snow-line* or *limit of perpetual snow* is that line below which all snow is melted by the summer heat, and above which there is always snow. Its height varies from the level of the sea in high latitudes to 20,000 ft. above that level in tropical regions.

Snow-fields are the names given to all permanent sheets of snow, whether occurring on lowlands, as in Greenland, or on tablelands, as in Norway, or on mountain slopes, as in the Alps.

Avalanches are falls of more or less consolidated snow which break off from the edges of snowfields overhanging steep slopes, and rush with violence and thundering noise into the valleys beneath, often marking their path by terrible destruction.

Glaciers are rivers of solid ice which descend down valleys and slopes of mountains from snow-fields lying above the limits of perpetual snow. When they pass below the snow-line, they melt and disappear in streams of water. The fissures and clefts formed in the ice by its passage over steep or abrupt places are called *Crevasses*; the stones, earth, and general débris which load the glacier are called *Moraines*.

Icebergs or **Ice Mountains** are huge floating masses of solid ice which have broken off from the ice-fields or glaciers of polar regions and drifted out to sea. They are of all shapes and sizes; but not more than an eighth part of their bulk stands out of the water. Small masses which drift on the surface are called *Ice-floes* (*Ice Islands*). When the ice-fields of the polar regions are broken up, and the parts are driven one upon another and crushed into vast heaps, these are called *Ice-packs*.

Obs. 6. **Hail** consists of pellets of snow, or of concretions of ice, which descend from clouds. These pellets are called *hail-stones*, and are of various shapes and sizes: but generally they are small and round, or pear-shaped. The mode of their formation is not known. Hail is more common in hot than in cold weather; and as it often accompanies thunderstorms it is supposed to be connected with electrical changes in the air.

CLIMATE.—This is the name now applied to that condition of the atmosphere as to moisture or heat which is normal at any given place, together with its meteorological conditions generally so far as they influence animal and vegetable life. The climate of any place is determined by the following five conditions, viz., 1. Distance from the Equator. 2. Distance from the sea. 3. Height above the sea. 4. Prevailing winds. 5. Local conditions as to soil, vegetation, and proximity to lakes or mountains.

Obs. 1. The surface of the earth is divided into five great climatic zones or belts, viz.—

a. The **Torrid Zone**, which extends from the tropic of Cancer 23° 28' N. of the Equator to the tropic of Capricorn, 23° 28' S. of the Equator.

b. The **North Temperate Zone**, which stretches from the tropic of Cancer to the Arctic Circle (66° 32' N. lat.).

c. The **South Temperate Zone**, which extends from the tropic of Capricorn to the Antarctic Circle (66° 32' S. lat.).

d. The **North Frigid Zone**, which embraces all that part of the earth's surface which lies N. of the Arctic Circle.

e. The **South Frigid Zone**, which comprises all that part of the earth's surface S. of the Antarctic Circle.

Obs. 2. These zones designate the three great types of climate prevalent on the surface of the globe—viz., **Torrid or Tropical**; **Temperate**; and **Frigid or Arctic**.

Obs. 3. According to the distribution of temperature throughout the year, climates are further classified as *Insular*, *Continental*, and *Extreme*.

Insular Climate is so called because it is the climate which prevails in *islands*. In this case the temperature of summer is not much in excess of that of winter. In the Friendly Isles the difference is only 2° Fahr.

Continental Climate is the climate which prevails in the interior of large countries, as Russia, Canada, &c., where the difference between summer and winter temperature is strongly marked. At Quebec this difference is 58° Fahr.

Extreme Climate is marked by a great difference between the temperatures of summer and winter—e.g., at Yakutsk in Siberia the difference is 102° Fahr.

Obs. 4. The **Mean Temperature** of summer, of winter, and of the whole year is indicated on maps by *Isothermal*, *Isocheimal*, and *Isothermal* lines.

Isothermal Lines are lines drawn through places having the same *summer* temperature.

Isocheimal Lines are lines drawn through places which have the same *winter* temperature.

Isothermal Lines are lines drawn through all places having the same *annual* temperature.

III.—POLITICAL GEOGRAPHY.

1. WHAT IT IS.

POLITICAL GEOGRAPHY occupies itself with the *artificial divisions* of the earth's surface into countries, and with the occupations, governments, &c., which men have devised for their collective and individual well-being.

2. EXPLANATIONS AND DEFINITIONS OF TERMS.

Government is that authority which is charged with the administration of the affairs of a country.

Obs. The manner in which this authority is exercised varies according to the constitution of the State. The two principal forms of Government are *Monarchical* and *Republican*.

A **Monarchy** is a state ruled by *one sole chief*, who usually bears the title of *King* or *Emperor*. Monarchies, again, are

1. **Absolute Monarchies**, where the sovereign power rests entirely in the person of the monarch, who is subject to no restrictions save those of the fundamental laws of the State—such, e.g., as *Russia* and *Turkey*.

N.B. These are sometimes called also **Despotisms** and **Tyrannies**.

2. **Limited Monarchies**, in which the sovereign power is divided between the monarch and the representatives of the nation, and exercised under the restrictions of a Constitution—such, e.g., are *England*, *Spain*, *Belgium*, &c.

N.B. These are called also **Constitutional** and **Representative Monarchies**.

A **Kingdom** is a monarchy which is ruled by a *King* or *Queen*—e.g., *England*, &c.

An **Empire** is a monarchy which is governed by an *Emperor*—e.g., *Austria*, &c.

N.B. Empires are popularly supposed to be larger than kingdoms, but they are not necessarily so. There is no difference other than this between them.

A **Republic** is a State in which the exercise of the sovereign power is lodged in representatives elected by the people—e.g., *France*.

N.B. What are called **Federal Republics** consist of several States, each of which retains its own peculiar Constitution—e.g., *Switzerland*.

A **Colony** is a foreign possession peopled chiefly by settlers from some parent state or by their descendants, e.g., *Canada*, *New Zealand*, &c.

Obs. The British possessions in India are not colonies.

A **Dependency** is a foreign possession which with its native people has become subject to another state, e.g., *Gibraltar*, *Malta*, &c.

EUROPE.

PHYSICAL GEOGRAPHY.

Latitude. Between 36° and 71° 6' N. *Longitude.* Between 9° 30' W. and 66° E.
Area. 3,933,073 sq. m.

POSITION AND BOUNDARIES.—Europe lies on the N.W. side of the Old World. It is bounded on the

N. by the Arctic Ocean.

E. by Eastern or Asiatic Russia, and the Caspian Sea.

S. by the Strait of Gibraltar, the Mediterranean, the Sea of Marmara, and the Black sea.

W. by the Atlantic Ocean.

COASTS.—The coasts of Europe are very irregular and greatly extended. The *coast-line* is estimated at 26,716 m. or 1 m. of coast to every 143 sq. m. of area; a proportion of coast-line to area much in excess of that of any other continent. The chief features on these coasts are the—

1. **Capes**, Kanin, and North, on the N.; The Naze, Skaw, La Hague, Finisterre, Roca, and St. Vincent, on the W.; Tarifa, Spartivento, and Matapan on the S.
2. **Inlets**, the White Sea, on the N.; The Baltic Sea, the Zuyder Zee, and Bay of Biscay, on the W.; the Mediterranean, Sea of Marmara, and Black Sea, on the S.

Obs. 1. The **Baltic Sea** is an arm of the North Sea, which stretches E. between Scandinavia, on the N., and Denmark and Prussia on the S.; and N., between Scandinavia and Russia. Its *length* is about 900 m., its *greatest breadth* 180 m., and its *area* about 160,000 sq. m. It includes four great arms, viz., the Gulfs of Bothnia, Finland, Riga, and Danzig, and receives about a fifth part of the entire drainage of Europe. Large quantities of *amber* are found on its S. shores.

Obs. 2. The **Mediterranean Sea** is the largest branch of the Atlantic Ocean. Its waters wash the S. shores of Europe, the W. shores of Asia, and the N. shores of Africa; and have an *area* of nearly 1,000,000 sq. m. Within its limits are included four minor seas, viz.:—1. *The Tyrrhenian Sea*, between Italy and the islands Corsica and Sardinia. 2. *The Ionian Sea*, between S.E. Italy and Greece. 3. *The Adriatic Sea*, between Italy and Turkey. 4. *The Aegean Sea* or *Archipelago*, E. of Greece.

Obs. 3. The **Sea of Marmara**, so called from the celebrated marble island (*anc. Proconessus*) near its W. end, communicates with the Mediterranean by the Dardanelles, and with the Black Sea by the Strait of Constantinople. Its waters are deep and without dangers to navigators.

Obs. 4. The **Black Sea** has an *area* of about 160,000 sq. m. Though it receives about a third part of the drainage of Europe its waters are only slightly less salt than those of the Atlantic. It is deep, free from rocks and islands, and easily navigable by skilful seamen; but it is subject to strong N.E. winds, heavy fogs, and terrific thunder-storms.

3. **Straits and Channels**, the most important of which are
 - a. *On the W.* Skager-Rack (between Jutland and Norway), Kattegat

(between Jutland and Sweden), Strait of Dover (between S.E. England and N.W. France), and the English Channel (between S. England and N.W. France).

b. On the South. Strait of Gibraltar (between Spain and Africa), Strait of Messina (between Italy and Sicily), Strait of Otranto (between Italy and Turkey), the Dardanelles or Hellespont, and the Bosphorus or Strait of Constantinople (between European and Asiatic Turkey).

ISLANDS.—The chief European islands are—

a. In the Arctic Ocean. Novaia Zemlia, Spitzbergen, and Waigatz.

b. In the Atlantic. Iceland, British Archipelago, and Azores.

c. In the Baltic Sea. Zealand, Funen, Bornholm, Öland, and Gothland.

d. In the Mediterranean, the Balearic Islands, Corsica, Sardinia, Sicily, Malta, the Ionian Islands, Crete or Candia, the Cyclades, and the N. Sporades.

PENINSULAS, AND ISTHMUSES.—Europe is singularly broken up into peninsulas by the deep penetrations of the seas which wash its shores. But although every peninsula is connected with the mainland by an *Isthmus*, only two of the European Isthmuses have received special appellations, viz., The *Isthmus of Corinth*, which connects the Morea with N. Greece; and the *Isthmus of Perekop*, which joins the Crimea to the mainland of Russia.

SURFACE.—The surface of Europe is agreeably diversified by mountains, plains, plateaux, and valleys. The principal surface features to be noted are the

1. **Mountains**, the most important of which, with their directions, positions, chief summits, &c., are given in the following table:—

CHIEF MOUNTAIN RANGES.			
NAME.	POSITION AND DIRECTION.	CHIEF SUMMIT.	
		NAME.	HEIGHT IN FEET.
1. Scandinavian Mountains ..	Stretching S. from the Arctic Ocean to the Skager-Rack	<i>Galdhöpigg</i> ..	8,546
2. Ural Mountains	Running S. from the Arctic Ocean to the River Ural, between Europe and Asia ..	<i>Tööl Pass</i>	5,544
3. Caucasus Mountains ..	Stretching N.W. from the Caspian to the Black Sea, between S.E. Europe and Asia	<i>Elbrus</i>	18,571
4. Carpathians ..	Which trend E. and N.W. between the plains of Hungary and Sarmatia	<i>Pietra</i>	8,090
5. Herzegovinian Mountains ..	Running from N.W. to S.E. along the N.W. side of Turkey	<i>Kom.</i>	9,575
6. Apennines ..	Stretching entirely throughout Italy from N.W. to S.	<i>Monte Corno</i> ..	9,543
7. Alps	Running N. and N.E. from the Mediterranean to the Danube, near Vienna ...	<i>Mt. Blanc</i>	15,784
8. Vosges	Between France and Switzerland, stretching from S.W. to N.E.	{ <i>Ballon de Guebwiller</i> }	4,694
9. Cevennes	In S.E. France, running from S.W. to N.E.	<i>Mt. Mézen</i>	5,755
10. Pyrenees	Running from the Gulf of the Lion W. to the Bay of Biscay between France and Spain	<i>Pic Nethou</i>	11,168

Obs. These mountains are further described under the countries to which they chiefly belong.

Obs. The *Alps* form a great mountain zone, bounding Italy on the N., and

separating that country from France, Switzerland, and Germany. The entire system, which forms the most important feature in the Physical Geography of Europe, consists of a number of separate masses and groups which send off divergent chains in all directions, and constitutes the regular separation of the maritime basins of Europe.

The *main divisions* of the Alps are differently given by different geographers. The divisions which date from the time of the Romans are given here because they are still the most convenient and the most clear.

DIVISIONS.	EXTENDING		CHIEF SUMMITS.	
	FROM	TO	NAMES.	HEIGHT IN FEET.
1. Maritime Alps	The Col di Tenda	Monte Viso	Grand-Ruen....	10,961
2. Cottian Alps	Monte Viso	Mont Cenis	Monte Viso	12,605
3. Graian Alps	Mont Cenis	Mont Blanc	Grand-Paradis ..	15,300
4. Pennine Alps	Mont Blanc	Mt. St. Gothard	Mont Blanc	15,784
5. Lepontine Alps	St. Gothard	Bernina	Pic Bernina	13,294
6. Rhaetian Alps	Bernina	Dreihermspize..	Orteler Spize	12,814
7. Carnic Alps	Dreihermspize ..	Mount Terglou ..	Gross Glockner ..	12,405
8. Julian Alps	Terglou	Bittoray	Schneeberg	5,015

2. **Volcanoes.** The extinct volcanoes of Europe are found principally on the mainland, *e.g.*, in France, in the Pyrenees, and in Germany; while the active volcanoes, save one, are upon islands. The chief active volcanoes are

a. Vesuvius,¹ (4165 ft.), near Naples on the W. coast of Italy.

b. Etna,² (10,840 ft.) on the N.E. coast of Sicily, the most celebrated volcano in Europe.

c. Stromboli, (3,090 ft.) at the W. extremity of the most N.E. of the Lipari Isles. It is constantly burning, and has therefore been termed "The Light-house of the Mediterranean."

d. Mount Hekla, (4,950 ft.) near the S.W. coast of Iceland.

3. **Plateaux or Tablelands.** These do not form any very distinctive feature in European geography. The most important of them are

a. The Tableland of Castile, in Spain, the most extensive and the loftiest plateau in Europe, its general elevation being 2,700 ft., and its highest point 4,500 ft. above the level of the sea.

b. The Plateau of Auvergne, a vast table-land in the heart of France. Its elevation is about 1,100 ft. and it is remarkable for the number of extinct volcanoes which it embraces.

c. The Bavarian Plateau, which forms a terrace on the N. side of the Alps, of from 1,500 to 1,600 ft. high. Its surface is remarkably uniform.

d. The Tableland of Bohemia, which is almost shut in by mountains, has an elevation of from 900 to 950 ft. above the sea. It is so formed that nearly the whole of its drainage is discharged through the Elbe alone.

e. The Transylvanian Tableland, a lofty region lying within the E. bend of the Carpathians.

4. **Plains.** Above two-thirds of the surface of Europe consists of Plains. The chief of these are

a. The Sarmatian Plain, which stretches from the Vistula to the Volga and the Ural Mountains, and occupies nearly the whole of Eastern Europe

b. The Germanic Plain, which stretches along the Baltic and North Sea

¹ The first eruption of Vesuvius on record is that of A.D. 79, which buried Herculaneum and Pompeii, with their inhabitants, by its ejected

lava and scorias.

² Between A.C. 476 and A.D. 1868, Mt. Etna has been in a state of eruption more than 60 times.

shores from the Memel to the Somme, and includes Belgium, Holland, Denmark, and large portions of Germany and Russia.

c. The *Plain of France*, which extends from the Somme throughout W. France to the Pyrenees.

d. The *Plain of Lombardy*, which lies between the Alps, the Apennines, and the Adriatic.

e. The *Hungarian Plain*, which extends from the Danube to the Transylvanian Tableland.

f. The *Wallachian Plain*, which lies between the lower Danube, and the Carpathians.

DRAINAGE.—The drainage of Europe flows to the Ocean over two great inclined planes, which slope towards the N.W. and S.E. respectively. The drainage of the N.W. slope flows into the Arctic and Atlantic Oceans; that of the S.E. slope into the Mediterranean, the Black Sea, and the Caspian.

Obs. The **Water-parting** between these two great regions, beginning at the N. end of the Ural Mountains, runs along that range as far S. as the 61° N. lat. Diverging here it proceeds in a gentle curve towards the S.W., until it reaches the Pyrenees. Its course thence is directly W., until it reaches the mid-region of the Cantabrian Mountains when, branching off abruptly towards the S., it follows a tortuous course to its termination at Cape Tarifa.

The principal draining agents are the

1. **Rivers**—the chief of which are those flowing into the

- a. *Arctic Ocean*, viz., Petchora, Dwina, and Onega.
- b. *Baltic Sea*, viz., the Duna, Memel, Vistula,¹ and Oder.
- c. *North Sea*, viz., the Elbe,¹ Weser, Rhine,¹ and Meuse.¹
- d. *English Channel*, viz., the Seine.
- e. *Bay of Biscay*, viz., the Loire, and Garonne.
- f. *Atlantic*, viz., the Tagus, Guadiana, and Guadalquivir.
- g. *Mediterranean Sea*, viz., the Ebro, Rhône,¹ Po, and Adige.
- h. *Black Sea*, viz., the Danube,¹ Dniester, Dnieper, and Don.
- i. *Caspian*, viz., the Volga, and Ural.

Obs. 1. The **Vistula** rises in the Carpathians, and after a general northward course of 696 m., flows by two great arms into the Gulf of Danzig. It drains an area of 69,909 sq. m., traverses Poland and Russia, and passes by the towns Cracow, Warsaw, Kulm, Bromberg, and Danzig. It receives numerous *tributaries*, of which the most important are the San, and the Bug, on the right bank, and the Pillea on the left bank.

Obs. 2. The **Elbe** rises among the S. slopes of the Riesengebirge in N.E. Bohemia, and after a general N.W. course of 723 m. empties itself through a large estuary into the North Sea. It traverses Bohemia, Saxony, and Prussia; and passes Dresden, Wittenberg, Magdeburg, Lauenberg, Hamburg, and Altona, and drains an area of 58,743 sq. m. On its left bank it receives the Moldau, and the Saale; on its right bank, the Spree.

Obs. 3. The **Rhine**, one of the largest rivers of Europe, rises in Mt. St. Gothard, flows N.E. to Coir, then N. to Lake Constance. Quitting the lake at its W. extremity the Rhine runs W. to Basle. Thence turning N. and N.W., after a total course of 853 m., it falls into the North Sea through various mouths. It traverses Switzerland, Germany, and Holland, and divides Germany from Switzerland. It flows past the towns Coir, Schaffhausen, Basle, Strasbourg, Mannheim, Mayence, Coblenz, Bonn, Cologne, Arnheim, and Rotterdam. On its right bank it receives the *tributaries* Neckar, Main, and Lahn; on its left bank, the Aar, and Moselle. It drains an area of 65,057 sq. m.

Obs. 4. The **Rhône** rises in Mt. St. Gothard. It flows S.W. and N.W. to the

¹ Described in the observations. The other rivers are described under the countries to which they belong.

Lake of Geneva, leaving the lake at its W. extremity it goes on in a S.W. direction till it comes to Lyons, whence it turns south and ultimately flows through four principal mouths into the Mediterranean. It is 525 m. long and drains an area of 36,781 sq. m. It traverses parts of Switzerland, and France, and the whole territory of Geneva, passing the Swiss towns Brieg, Visp, Leuk, Sion, and Martigny; the city of Geneva; and the French towns Lyons, Valence, Avignon, and Arles. After entering France it receives, on its right bank, the Saône; and on its left bank the Isère and Durance. (See p. 69.)

Obs. 5. The **Danube**, the second longest river in Europe, stretches from the Black Forest, to the Black Sea, flowing over a general S.E. course of 1,613 m. long. It traverses Würtemberg, Bavaria, Austria, and Hungary; separates Hungary from Servia, and Bulgaria from Roumania, and passes by the towns Ulm, Ratisbon, Linz, Vienna, Pressburg, Buda-Pesth, and Belgrad. It receives on its right bank the Inn, Drave, and Save; on its left bank, the Theiss, Sereth, and Pruth. It drains an area of 299,485 sq. m.

2. **Lakes.**—Geographers have divided European Lakes into two classes, viz., into

a. *Highland Lakes*, the chief of which are Geneva or Leman, Constance or Bodensee, Neuchâtel, Lucerne, Lugano, and Zurich, in Switzerland; Garda, Maggiore, and Como, in Italy.

b. *Lowland Lakes*, the largest of which are Ladoga, Onega, Saima, and Peipus, on the Russian shores of the Baltic; Wener, Wetter, and Maclar, in Sweden.

3. **Glaciers.**—European Glaciers occupy four principal regions, viz.

a. The *Alps*, which embrace about 1,100 glaciers, the largest of which are the Mer-de-glace, on Mont Blanc; the Græner, on Monte Rosa; and the glaciers of Aletsch and Viesch.

b. The *Caucasus Mountains*, which region is only second to that of the Alps in respect to its ice. The huge glacier of Divdorak, on the N.E. flanks of Kasbek, forms the principal mass.

c. The *Pyrenees*, which embosom more than 100 glaciers, the most important being the E. glacier of the Vignemale, on the N. side of the system.

d. The *Mountains of Scandinavia*, which have many of their ravines filled with glaciers that descend towards the fjords on the coast. The largest is that of Lodal, which flows from the immense Névê fields of the Jostedal.

CLIMATE.—Europe, lying almost wholly within the N. Temperate Zone, enjoys a *temperate* climate, which is still further modified and ameliorated by the peculiar form and position of this continent; so that the summers are less intensely hot and the winters less bitterly cold in Europe than are the summers and winters of other continents between the same parallels of latitude.

Obs. 1. These peculiarities are due mainly to the following natural causes.

a. The hot winds which blow from the burning deserts of Africa raise the temperature of those countries which lie in their path.

b. The S.W. winds which come from tropical regions and pass over the Gulf Stream, the waters of which are from 10° to 12° Fahr. warmer than those of the main ocean, increase the temperature of those countries of W. Europe which border on the Atlantic.

c. The dry, cold, biting winds from the Arctic Ocean and the frozen plains of Siberia lower the temperature of the N. and E. countries of Europe.

Obs. 2. The **Rainfall** of Europe is greater in the W. than in the E. The greater part of the *western* fall occurs in the winter; while the bulk of that in the *interior* takes place in the summer. The *wettest* spots in Europe are Scathwaite (140 in.) in Cumberland, Portree (109 in.) in the Isle of Skye, and Coimbra (118 in.) in Portugal, all on the Atlantic Coast; while the *driest* districts are Astrakhan (4.5 in.) on the Caspian, Kalmar (13 in.), and Pitea (13 in.), both in E. Scandinavia.

PRODUCTIONS.—The most important of these are classed under the heads *Animal*, *Vegetable*, and *Mineral* productions.

i. **ANIMAL PRODUCTIONS.**—These may be classified as follows :

1. **Quadrupeds**,¹ which are

a. *Domesticated*, as the horse, cow, sheep, pig, goat, cat, and dog.

Obs. The *reindeer* is domesticated in Sweden, Norway, and Russia ; the *buffalo* in the lower valley of the Danube, in S. Russia and in Italy. The *mule* thrives most in the southern peninsulas of Europe.

b. *Wild*, as the stag, deer, fox, hare, rabbit, squirrel, weasel, rat, and mouse.

Obs. The *polar bear* still roams the shores of the Arctic Ocean ; the *brown bear*, the forest of the Pyrenees. The *wild boar* and the *wolf* have still haunts to which they can resort all over Europe. The *beaver* has been driven into solitary nooks of the great rivers ; the *chamois* and the *ibex* into the wilds of the high Alps and Pyrenees. The *monkey* finds his only home on the rock of Gibraltar, the *camel* in S. Russia, while the rare *lynx* is almost confined to Spain and Central France.

2. **Birds**,² which also are

a. *Domesticated*, as the common fowl, pigeon, duck, goose, and swan.

Obs. The *turkey*, *peacock*, *guinea fowl*, &c., are but naturalised foreigners.

b. *Wild*.—The hawk, owl, grouse, black game, pheasant, partridge, wood-pigeon, plover, crow, starling, sparrow, nightingale, blackbird, thrush, linnet, goldfinch, and robin-red-breast.

Obs. The *royal eagle* is yet found in the secluded mountain regions of Europe. The *rulture* is not uncommon, and *falcons* are still trained for sporting purposes. The *eider-duck* and other *wild-fowl*, in countless numbers, occupy the shores of Norway and the northern islands. The *pheasant* is a foreign importation.

3. **Insects**, as bees³ and wasps, locusts, beetles, and moths, spiders, and ants.

Obs. The *silk-worm* is extensively cultivated in Italy, S. France, and Spain.

4. **Reptiles**, as the serpent, lizard, and frog.

Obs. The only venomous serpents are of the *viper* kind, and they are not numerous. A few species of *tortoise* are found on the islands of the Mediterranean, in Germany, and in Shetland.

5. **Fish**,⁴ as the shark, cod, herring, mackerel, pilchard, turbot, sole, and salmon.

Obs. The *tunny* and the *anchovy* are plentiful in the Mediterranean ; the *sturgeon* in the Danube, Volga, and other large rivers.

ii. **VEGETABLE PRODUCTIONS.**—Which may here be roughly divided into *Food Plants* and *Other Useful Plants*.

1. **Food Plants** embrace

a. *Cereals*, e.g. wheat, barley, oats, rye, and maize.

Obs. *Wheat* is grown in all European countries S. of the 58th parallel ; *barley*, *oats*, and *rye*, chiefly in the central regions, and further N. than wheat ; while *maize* is cultivated chiefly in Germany and S. Europe.

b. *Vegetables* (popularly so called), e.g. potatoes, cabbage, beans, peas, turnips, carrots, onions, beets, parsnips, cucumbers, &c.

c. *Fruits*, e.g. grapes, figs, oranges, melons, apples, pears, peaches, plums, cherries, gooseberries, currants, raspberries, and strawberries.

Obs. Connected with food plants, but not strictly belonging to any of these divisions are *hops*, used for flavouring beer, *tobacco*, a narcotic plant, and *sugar-cane*, grown in Spain, Italy, and Sicily.

¹ From *Quadrupeds* we get not only our mutton, beef, game, venison, butter, cheese, and milk, but also wool, hides, tallow, skins, furs, hair, bristles, horn, and bone.

² *Birds* yield us food, feathers, down, and quills.

³ *Bees* give us honey and wax.

⁴ *Fish* furnish oil, whalebone, iinglass, and caviare.

2. Other Useful Plants include

a. Forest trees, whence timber is derived, *e.g.* pine, fir, oak, elm, ash, beech, chestnut, and walnut.

b. Textile plants, *e.g.* flax, and hemp.

Obs. *Dye plants, medicinal plants, &c.*, will be noticed under the countries of which they are important productions.

iii. MINERAL PRODUCTIONS.—The principal mineral productions of Europe are coal, iron, lead, copper, tin, and salt.

Obs. Europe also produces diamonds and other precious stones; gold, silver, platinum, mercury; alum, sulphur, petroleum, marble, and slate. But as these are of local rather than general distribution, they are mentioned under the countries which yield them.

PEOPLE, LANGUAGES, and RELIGION.—The estimated *population* of Europe is over 296 millions, nearly all of whom belong to the *Caucasian* variety of the human race.

Obs. 1. The European Caucasians belong to the *Aryan*, or *Indo-Germanic* branch, of which there are four principal divisions, *viz.*

a. The Teutonic which includes the Germans, Danes, Scandinavians, English, Scotch, and Dutch.

b. The Celtic which embraces the Irish, Welsh, Bretons, and Gaels.

c. The Romanic or *Latin*, including the Wallachs, Italians, Spanish, Portuguese, and French.

d. The Slavonic which includes Russians, Poles, Bulgarians, Servians, Bohemians, and Hungarians.

Obs. 2. The *non-Caucasian* part of the European population belongs to the *Turanian Family* and includes the Turks, Tartars, Finns of S.E. Europe; the Lapps of Lapland; the Magyars of Hungary; and the Basques of the Pyrenees.

The *Languages* spoken by the Caucasian variety in Europe are branches of the Aryan families. The Mongolians speak languages which belong to the northern division of the Turanian family.

With respect to *Religion*, the inhabitants of Europe, save the Mongolians in Turkey and some two millions of Jews, are *Christians*.

POLITICAL DIVISIONS.—Europe is occupied by 18 distinct sovereign Powers.¹ The *States* which they form together with their *Capitals* are as follows :

STATES.	CAPITALS.	STATES.	CAPITALS.
I. NINE KINGDOMS.		II. FOUR EMPIRES.	
1. GREAT BRITAIN....	London.	10. GERMANY.....	Berlin.
2. { NORWAY.....	Christiania.	11. AUSTRIA-HUNGARY	Vienna.
and		12. TURKEY.....	Constantinople.
{ SWEDEN.....	Stockholm.	13. RUSSIA ²	St. Petersburg.
3. DENMARK.....	Copenhagen.	III. TWO REPUBLICS.³	
4. HOLLAND.....	The Hague.	14. FRANCE.....	Paris.
5. BELGIUM.....	Brussels.	15. SWITZERLAND....	Bern.
6. PORTUGAL.....	Oporto.	IV. THREE PRINCIPALITIES.⁴	
7. SPAIN.....	Madrid.	16. ROUMANIA.....	Bucharest.
8. ITALY.....	Rome.	17. SERBIA.....	Belgrad.
9. GREECE.....	Athens.	18. MONTENEGRO....	Cettigne.

¹ Excluding the petty States of *Andorra*, *Monaco*, *Liechtenstein*, *Luxembourg*, and *San Marino*.

² Including *Finland*, *Poland*, *Caucasia*, and all the territory acquired under the "Treaty of

Berlin" (1878).

³ To these may be added the little republics of *Andorra* and *San Marino*.

⁴ *Monaco*, *Luxembourg*, and *Liechtenstein*, may be added to the principalities.

Obs. 1. While in *area* Russia is much larger than all the rest of Europe put together, her *population* is less than that of Germany and Austria-Hungary. The smallest state is *Montenegro* with an *area* about two-thirds that of Yorkshire, and a *population* not much larger than that of the town of Leeds!

Obs. 2. These States are also divided, according to their moral and political influence, into three classes, viz.—*Class I.*, or the “five great powers,” Great Britain, France, Germany, Russia, and Austria. *Class II.*, Italy, Belgium, Holland, Norway and Sweden, Turkey, and Spain. *Class III.*, Denmark, Portugal, Switzerland, and Greece.

Obs. 3. *Montenegro*, *Roumania*, and *Servia*, acquired their independence under the “*Treaty of Berlin*” (1878).

THE BRITISH EMPIRE.

FOR convenience of description, the British empire may be considered to consist of four distinct parts, viz., 1. **England**; 2. **Scotland**; 3. **Ireland**; 4. **Foreign and Colonial Possessions**

Obs. England and Scotland together constitute the island Great Britain.¹

I. ENGLAND.²

PHYSICAL GEOGRAPHY.

Latitude. Between 50° and 56° N. *Longitude.* Between 1° 45' E. and 5° 44' W.

Area. 58,811 sq. m.

Obs. England, including the Principality of Wales,³ occupies the S. part of Great Britain. It is the richest, most thickly peopled, and most important portion of the Empire. Its greatest *length*, from Lizard Point, in the S. W., to Berwick, in the N. E., is 425 m.; its greatest breadth from Land's End, in the S. W., to the South Foreland, in the E., is 320 m.

POSITION AND BOUNDARIES.—England lies off the W. coast of Europe. It is bounded on the

N. by Scotland.

E. by the North Sea, and the Strait of Dover.

S. by the English Channel.

W. by St. George's Channel and the Irish Sea.

Obs. 1. England is only 21 m. from the nearest part of Europe.

Obs. 2. The *North Sea* is often called the *German Ocean*. It is a part of the Atlantic Ocean and lies between Europe and Great Britain, extending from the Shetland Isles on the N. to the Strait of Dover on the S.

Obs. 3. The *Irish Sea* is also a part of the Atlantic Ocean. It lies between England and Ireland.

Obs. 4. *St. George's Channel* is another portion of the Atlantic Ocean: it lies between Wales and Ireland.

COASTS.—The coasts of England are, for the most part, bold and

¹ Great Britain is the largest island in Europe. It is 600 m. long from N. to S.

² The name *England* is another form of the word *Engle-land*—“the land of the Angles.” The Angles were a Teutonic tribe, who came from the Duchy of Sleswick and settled in England

between the years A.D. 530 and 547.

³ *Wales* is a corruption of *Wealhias*, the plural of *Wealh*, a Welshman or foreigner. The Anglo-Saxons called their Celtic neighbours the *Welsh*, and their country *Wailes*. Cf. *Wallachia*

rocky; and they are much penetrated by the sea. Their total length is 2,000 m., or about 1 m. of coast to every 29 sq. m. of area. Their chief features are the

1. **Capes**, Filey Point, Flamborough Head,¹ Spurn Head, Gibraltar Point, Lowestoft Ness,² the Naze, and the North and South Forelands, on the E. Dungeness,³ Beachy Head,⁴ Selsey Bill,⁵ Durlston Head, St. Alban's Head, Portland Bill, Start Point,⁶ and the Lizard,⁷ on the S.

Land's End, Hartland Point, Worm's Head, St. Goven's Head, St. David's Head, Braich-y-pwll, Great Orme's Head,⁸ Point of Ayr, and St. Bee's Head, on the W.

2. **Inlets**, Tees Bay, Druridge Bay, Filey Bay, the Humber,⁹ Wash, and Estuary of the Thames, on the E.

Pevensey Bay, Portsmouth Harbour, Southampton Water, Poole Harbour, Weymouth Bay, Plymouth Sound, Falmouth Bay, and Mount's Bay, on the S. Barnstable Bay, the Bristol Channel, Swansea Bay, Carmarthen Bay, Milford Haven, St. Bride's Bay, Cardigan Bay, the Estuaries of the Dee, Mersey, and Ribble, Morecambe Bay, and Solway Firth, on the W.

3. **Straits, Roads, and Channels**, as the Yarmouth Roads, the Downs, and the Strait of Dover, off the E. coast. Spithead, and the Solent, off the S. coast. The Menai Strait, between N.W. Wales and Anglesey, off the W. coast.

Obs. 1. The **Yarmouth Roads**, lie between the coast of Norfolk and an outer line of sandbanks, and form the only secure place of anchorage between the Humber and the Thames.

Obs. 2. The **Downs**, so called from the *dunes*, or sandheaps, lie between the coast of Kent and the Goodwin¹⁰ Sands. They are 8 m. long and 6 m. wide, and, containing about 20 sq. m. of excellent anchorage, form one of the largest natural harbours of refuge in the world.

Obs. 3. The **Strait of Dover** separates S.E. England from N.W. France, and joins the North Sea to the English Channel. It extends from the South Foreland and Calais, in a S.W. direction, to Dungeness and Cape Gris Nez, a distance of 22 m. Its narrowest part, 21 m. across, is between Dover and Calais.

Obs. 4. **Spithead** is a notable roadstead between Portsmouth and the Isle of Wight, and a well-known rendezvous of the British navy.

Obs. 5. The **Solent** lies between Hampshire and the N.W. shore of the Isle of Wight. It is about 18 m. long, and has an average breadth of about 3 m.

Obs. 6. The **Menai Strait** extends N.E. and S.W., from Beaumaris to Carnarvon. It is 14 m. long, and varies in breadth from about 200 yards to 2 m., and is crossed by a suspension and by a tubular bridge, which are within 4 m. of one another. The railway from Chester to Holyhead passes through the tubular bridge.

ISLANDS.—The chief ¹¹ islands adjacent to the English coasts are—

Holy Island or Lindisfarn, Sheppey, and Thanet, off the E. coast.

The Isle of Wight, and the Scilly Isles, off the S. coast.

Anglesea, Walney Island, and the Isle of Man, off the W. coast.

¹ **Flamborough Head**—"Flame-borough Head"; and was perhaps so called from the *flames* or *beacon-fires* which the Danes were wont to kindle there. The word might, however, come also from *flam*—"a fugitive," and the place thus mean "a camp of refuge."

² **Ness** is a Teutonic word = *nose* or *headland*.

³ **Dungeness**—"Dingy ness"—Grey ness or Cape. This headland consists of a long spit of shingle, formed by the disintegration of the cliffs above Beachy Head, and has for the last 200 years been advancing seaward at the rate of 20 feet a year.

⁴ **Beachy Head**, supposed to be a corruption of the French phrase *Beau Chef*, is the loftiest headland (564 ft.) in the S. of England.

⁵ **Selsey**—"Seals' Island." The term *bill* is applied to the cape from its likeness to a "beak" or "bill."

⁶ **Start**—"a tail."

⁷ **Lizard**—"the high fort;" the Celtic word and meaning "high," "great."

⁸ **Great Orme's Head** takes its name from the great *orm*, or *worm*, or *sea-serpent* of the Norse legends.

⁹ **Humber** is, perhaps, a corruption of the Cymric root *aber*—"a confluence of two rivers, or of a river and the sea."

¹⁰ The **Goodwin Sands** are a range of shoals, in the Strait of Dover, which run almost parallel with the coast. They extend about 9 m. between the N. and the S. Forelands, and are entirely covered at high water.

¹¹ The smaller and less important islands are: the *Fern Islands* and *Coguet Island*, off the Northumbrian shore, and *Causey*, off the S. Essex shore; *Lundy*, at the entrance of the Bristol Channel; *Bardsey*, off the coast of Carmarvon; and *Holy Island*, off the W. coast of Anglesea.

Obs. 1. Isle of Wight, off the Hampshire coast, lies in the English Channel. It belongs to the county of Hants, covers an area of 146 sq. m., and has a population of 66,219. The island is famous for its genial climate and its charming scenery. The chief river of the island is the Medina; the chief town, Newport; and the chief watering-places, Ventnor, Ryde, Cowes, Sandown, and Shanklin.

Obs. 2. The Isle of Man lies near the middle of the Irish Sea. The island has an area of 227 sq. m., and a population of 54,042. Lead, zinc, and copper are among the mineral products of the island; agriculture is steadily improving though the land is not naturally very productive. The chief towns are Castle-town and Douglas.

SURFACE.—England is mountainous in the N. and W.; hilly in the S.; and undulating, or level, in the centre and E. The surface features to be particularly noted are

1. The **Mountain and Hill Ranges**, which, with their positions, directions, and chief summits, are given in the following table:—

NAMES OF MOUNTAINS.	POSITION AND DIRECTION.	SUMMITS.	
		NAMES OF.	HEIGHT IN FEET.
1. Cheviot Hills ..	{ Between England and Scotland, stretching from W. towards N.E. }	<i>Cheviot Peak</i>	2676
2. Pennine Chain. .	{ In the centre of northern England, extending from the Cheviots southward to Derbyshire. }	<i>Cross Fell</i> ¹	2927
3. Cumbrian ² Group	{ In the N.W. of England, occupying parts of Cumberland, Westmoreland, and Lancashire. }	<i>Skaw Fell</i> ³	3229
4. Cambrian Mts. .	{ In Wales, stretching from Snowdon in the N. to St. David's Head in the S.W. }	<i>Snowdon</i> ⁴	3590
5. Cotswold ⁵ Hills.	{ In Gloucestershire, stretching from N. to S. }	<i>Cleeve Hill</i>	1134
6. Cornish Heights	{ In Cornwall, extending from Barnstaple Bay to Land's End }	<i>Brown Willy</i>	1364
7. North Downs ..	{ In Hants, Surrey, and Kent, running E. and S.E. to the vicinity of Dover }	<i>Inkpen</i> ⁶ Beacon .	1011
8. South Downs ..	{ In Hants and Sussex, stretching from Salisbury Plain eastward to Beachy Head }	<i>Butser Hill</i>	882
9. Chiltern Hills ..	{ In Oxfordshire, Bucks, and Herts, extending from the Thames N.E. to the East Anglian Heights }	<i>Wendover Hill</i> ..	905

Obs. 1. The Pennine Chain is the longest mountain range in England (270 m.). It consists of a succession of elevated, bleak, and treeless moorlands, intersected by deep valleys and crowned by many lofty summits. The main ridge of the range forms the Water Parting between the basins of the German Ocean and the Irish Sea.

Obs. 2. The Cumbrian Group forms a compact circular mountain mass, which throws up some of the loftiest summits in England, e.g., *Skaw Fell* (3,229 ft.), *Helvellyn* (3,055 ft.), and *Skiddaw* (3,022 ft.). This group embosoms what is known as "The English Lake District."

Obs. 3. The Cambrian Mountains, properly speaking, include all the Welsh mountains. The name is, however, applied here to what may be termed the *Azral Range*, which runs from Snowdon, in the N.W. to near St. David's Head in the

¹ *Fell*, fr. Norw. *Fjeld* = "a hill-side."

² *Cumbria* = *Cumberland* = "The land of the Cymri." ³ *Skaw* or *Skaw* = "The Craggy Hill."

⁴ *Snowdon* (= "Snow Hill") is the highest mountain in England.

⁵ *Wold* is a form of the words "Weald," "Wold," and Germ. "Wald," = "a forest." The Yorkshire Wolds are treeless now.

⁶ *Pen* (Welsh) = "a head." By metonymy the word is widely used for "a mountain."

S.W., following, generally, the curve of the shores of Cardigan Bay. Their chief branches are the *Berwyn Mountains*, which culminate in *Cader Idris* (2,959 ft.), and the *Llindinam Range*, which trends S.E. and N.E. from *Plynlimmon* (2,463 ft.).

2. **Plains**, of various elevations, form a large portion of the surface of England. The largest and best known of them are—

a. The *Plain of York*, which is the most extensive in England. It stretches from the Tees to the Don, and from the York Wolds to the Pennine Chain. It is a broad rich tract of level land, generally known as the “Vale of York.” It slopes gently from the N. towards the S.E., and is drained by the Ouse and its tributaries.

b. The *Cumbrian Plain*, which lies N. of the Cumbrian Mountains, is a low, flat or undulating, and fertile region, drained by the Eden.

c. The *Cheshire Plain*, which extends S. from the Ribble to the Severn, and E. from the sea to the highlands of Lancashire, Cheshire, and Stafford, and is watered by the Ribble and Mersey and their tributaries. It forms one of the richest grazing districts in England.

d. The *Central Plain*, sometimes called the *Central Tableland*, has an elevation of from 300 to 400 ft. above the level of the sea. It extends W. from the Ouse to the Valley of the Severn; and from the Valley of the Trent S. to the Valley of the Thames.

e. The *Eastern Plain*, which stretches from the Wash S. to the Thames, and from the East Anglian heights E. to the sea, including parts of Norfolk, Suffolk, and Essex. It consists, for the most part, of arable land, and contains some of the first agricultural districts in England.

f. *Salisbury Plain*, in Wiltshire, which is an elevated, level expanse, 400 feet above the sea. It is almost treeless, its soil is light and scanty, but it is coated with fine turf, which affords good sheep pastures. The Druidical remains of Stonehenge lie upon this plain, 8 m. from Salisbury.

DRAINAGE.—The copious drainage of England is carried to the ocean by five great inclined planes, which slope, respectively, E., towards the North Sea; S., towards the English Channel; N.W., towards the Bristol Channel; S.W., towards the Bristol Channel, and W. towards the Irish Sea. The principal drainage agents of England are the

1. **Rivers**, which flow down the

a. *Eastern Slope*, into the North Sea: viz., the Tyne,¹ Wear, Tees, Ouse,¹ which all rise among the E. defiles of the Pennine Chain; the Trent,¹ which rises in the Staffordshire Moorlands; the Witham, which rises on the W. side of, and flows through, the Lincoln Heights; the Welland, Nen, Ouse,¹ which all rise in the Central Plain; the Yare,² which rises in the East Anglian Heights; the Thames,¹ and the Medway¹ which rises in the Wealden Heights.

b. *Southern Slope*, into the English Channel: viz., the Arun, and Test, which rise in the North Downs; the Avon,¹ and the Stour,¹ which rise in the Salisbury Plain; the Exe,¹ which rises in Exmoor; the Teign,¹ Dart,¹ Plym, and Tavy, which rise in Dartmoor; the Tamar,¹ Fowey, and Fal, which rise in the Cornish Heights.

c. *North Western Slope*, into the Bristol Channel: viz., the Torridge, which rises in the Cornish Heights; the Tawe,² which rises in Dartmoor; the Parret, which rises in the Dorset Heights; and the Avon,¹ which rises in the Cotswold Hills.

d. *South Western Slope*, into the Bristol Channel: viz., the Severn, Wye,¹ Usk,¹ Towy, and Taff, which rise in the Cambrian Mountains.

e. *Western Slope*, into the Irish Sea: viz., the Weaver, which rises in the

¹ The river-names Avon, Axe, Dart, Exe, Ouse, | from roots which mean “water” or “river”
Thames, Trent, Tyne, Usk, and Wye are all derived | ² Yare, from Welsh *Garn* = “rough.”

Staffordshire Moorlands; the Mersey, Ribble, Lune, and Eden, which all rise in the Pennine Chain.

Obs. 1. The **Thames** is the largest and most important of English rivers. It rises in Gloucestershire, among the Cotswold Hills, flows S.E. and E. for more than 200 m., and falls into the North Sea by a large estuary. It is navigable for 160 m., and receives many tributaries from both N. and S. It passes by Oxford, Reading, Eton, Windsor, and London.

Obs. 2. The **Severn** is the second largest English river. It rises in Wales, in Mt. Plynlimmon, and going generally towards the S. falls into the Bristol Channel. It is 178 m. long, and receives tributaries on both its banks. It is navigable almost from end to end, and passes by Shrewsbury and Gloucester. The famous port of Bristol is on the Avon, one of the Severn's tributaries.

Obs. 3. The **Humber**, an important river of N.E. England, is formed by the junction of the *Ouse* and *Trent*. This system drains the greater part of N.E. England, and embraces many tributary streams. In its valley lie the towns York, Ripon, Leeds, Sheffield, Nottingham, Derby, and Hull.

Obs. 4. The **Mersey**, a very important river of N.W. England, rises among the S. spurs of the Pennine Chain, and flows W. to the North Sea. Manchester lies upon one of its tributaries, and Liverpool is near its mouth.

2. **Lakes**, which are small, but renowned for the romantic beauty of their natural scenery. They lie embosomed in the Cumbrian and Cambrian Mountains. The most important of them are

a. *Windermere*, the largest, in Lancashire and Westmoreland.

b. *Ulleswater*, in Cumberland and Westmoreland, the grandest though not the largest of the English lakes.

c. *Derwent Water* or *Keswick Lake*, in Cumberland, the most beautiful of the lakes. It is situated in an amphitheatre of mountains, at an elevation of 238 feet above the level of the sea.

d. *Bala*, in Merioneth, N. Wales, the largest of the Welsh Lakes.

Obs. The smaller lakes are *Bassenthwaite*, *Crummock Water*, *Ennerdale Water*, and *Wast Water*, in Cumberland; *Grasmere*, and *Rydal Water*, in Westmoreland; and *Coniston Water*, in Lancashire.

CLIMATE.—Position in the Temperate Zone, insular position, prevailing winds, and moderate elevation above the level of the sea, all combine to modify the climate of England, and to make it very salubrious.

Obs. Although our *summers* are sometimes very hot and our *winters* very cold, extremes of heat and cold are unknown.¹ Again, as the *prevailing winds* blow from the S.W. and W., and arrive from the Atlantic heavily laden with warm vapours, we have cloudy skies, frequent rains, numerous fogs, and a generally humid climate. The excellence and healthiness of this moist atmosphere, however, are clearly shown by the vigour and longevity of the people, by the verdancy and abundance of the pastures, and by the luxuriance and attractive beauty of the vegetation.

PRODUCTIONS.—The *animal productions* of England have been gradually diminished by the advance of civilization. With the disappearance of the great forests which once covered the country, have disappeared also many of their wild and wandering tenants. The bear, beaver, wolf, wild boar, and wild cat are extinct. The wild ox, stag, deer, and roe have escaped the same fate only by having become the objects of special protection.

For her *vegetable productions*, England is largely indebted to foreign countries. Most of her *breadstuffs*, many of her *esculent plants*, her *hops*, and her *choicest fruits* were originally importa-

¹ The difference between the Mean Summer and Mean Winter temperatures is less than 30° Fahr.

tions from abroad. But, happily, the soil of England is so suited to the nature of all these exotics, that they mature as though they were indigenous to it.

It is, however, to her *mineral productions*¹—especially to her practically inexhaustible stores of coal² and iron³—that England owes most of her wealth and much of her greatness.

Obs. Other valuable *minerals* found in England are copper, tin, lead, salt, slate, limestone, and building-stones.

PEOPLE AND LANGUAGE.—The *English* are a Teutonic race, descended from the Angles, Saxons, and Jutes, who conquered England in the fifth century. The original Celtic population was partly exterminated by, and partly incorporated with, the conquerors. The *Welsh* are descended from the ancient Britons, and are, therefore, of Celtic origin. In 1871 the *population* of England and Wales was 22,712,266 persons. The *language* is a dialect of the Low German branch of the Teutonic family, and is called “English.” It is spoken all through the country, except in parts of Wales, where a Cymric class (Welsh) of the Celtic tongue is used.

POLITICAL GEOGRAPHY.

POLITICAL DIVISIONS.—From very early times England has been divided into counties. Since there are *fifty-two* of these, viz., *forty* in England, and *twelve* in Wales, it is usual for convenience of learning and memory, to arrange them in groups,⁴ as follows—

I. 5 SOUTH-EASTERN COUNTIES.⁵

Obs. The *county towns*⁶ are printed in *bold type*; the *largest towns*, when not the capitals, in *italics*. The *population* of the *largest town* is added in brackets.

1. SURREY 7.... **Guildford**, Croydon (55,652), Reigate, Kingston, Richmond.⁸
2. KENT⁹ **Maidstone**, Dover (28,506), Chatham, Canterbury,¹⁰ Folkestone, Tunbridge Wells, Rochester.
3. SUSSEX¹¹ **Lewes**,¹² Brighton (90,011), Hastings,¹³ Hove, Chichester.
4. HAMPSHIRE¹⁴ **Winchester**, Portsmouth (113,569), Southampton, Aldershot.
5. BERKSHIRE.. **Reading** (32,324), Windsor, Newbury.

¹ Nearly all the mineral productions of England lie W. of a line drawn from the mouth of the Tees, through York, Nottingham, Leicester, and Oxford, to the mouth of the Exe.

² The 15 coal fields of England, named in the order of their size and importance, are—1. The Great S. Wales.* 2. The Great Northern,* or Newcastle and Durham. 3. The Yorkshire,* or Leeds and Nottingham. 4. The Lancashire. 5. The Derbyshire. 6. The Cumberland, or Whitehaven. 7. The N. Staffordshire,* or Potteries. 8. The S. Staffordshire,* or Dudley.* 9. The North Wales, or Flint and Denbigh. 10. The Somerset, or Bristol. 11. The Dean Forest. 12. The Coalbrook.* Dole. 13. The Warwickshire. 14. The Leicestershire. 15. The Ingleton (N. W. Yorks).

³ The principal iron-fielding coal fields are marked with an asterisk.

⁴ For the methodical administration of justice, the English counties, exclusive of Wales, are thrown into six groups called *Circuits*. The groupings given in *Manuals of Geography* are various and purely arbitrary.

⁵ *County* (Lat. *comes* = a companion”), originally the domain of a count or earl. The equivalent English term is *Shire* = a share or division

(Sax. *scira* = “to share,” “divide”). Norfolk, Suffolk, Essex, Middlesex, Kent, and Sussex were originally distinct sovereignties, and so are properly not called shires. For a similar reason Cornwall also is not a shire.

⁶ *County Towns* are those towns in which the various Courts of the County are held—e.g., the Courts of Assize, Quarter Sessions, &c.

⁷ Old form, *Sothe-rye* = “South realm.”

⁸ Formerly *Shene*, till Henry VII. rebuilt the palace and called it, after his own title, Richmond.

⁹ From Celtic *ceua* = “a head.”

¹⁰ *Thomas à Beckett* was murdered in Canterbury Cathedral. A.D. 1170.

¹¹ *Sussex* = “the kingdom of the S. Saxons.”

¹² *Simon de Montfort* and the Barons here defeated and took prisoner Henry III. A.D. 1264.

¹³ The head of the “*Cinque Ports*,” or five harbours. These were Hastings, Romney, Hythe, Dover, and Sandwich. Hastings gives its name also to the battle in which William Duke of Normandy defeated the Saxons under Harold II. A.D. 1066.

¹⁴ An abbreviation of *Southamptonshire*, which is further abbreviated to *Hants*.

Obs. These counties are *agricultural*, and are hilly and well wooded. In addition to the usual agricultural produce, **Surrey** is famous for its *hops*; **Kent** for its *hops* and *orchards*; **Sussex** for its *hops* and *S. Down sheep*; and **Hants** and **Berks** for their *hogs* and *bacon*. **Surrey**, adjoining London and the Thames on the N., and **Kent**, **Sussex**, and **Hants** being *maritime* counties, possess important *river* and *sea-ports*, considerable *military* and *naval establishments*, and productive *fisheries*. A large proportion, therefore, of the population of these counties is engaged in *military*, *naval*, and *seafaring pursuits*. These counties are protected by the strong fortress of Dover, and by other *military defences*, and are intersected by the S.E.; S.W.; L. Ch. and Dover; and Brighton and South Coast Railways.

NOTES ON THE TOWNS.

Maidstone (*Medway's Town*), 56 m. S.E. of London, is the centre of the hop trade. **Chatham** is a naval and military station of great importance. **Dover** and **Folkestone** are chief ports of communication between England and the Continent. The former is also a strong fortress, and one of the "Cinque Ports." **Canterbury** is the Ecclesiastical Metropolis of England, and renowned for its grand cathedral.

Brighton, and **Hastings** are very favourite watering-places.

Winchester, 60 m. S.W. of London, is illustrious as the old Metropolis of England, and as the seat of a grand cathedral and a college. **Portsmouth** is said to be one of the finest harbours for ships of war in the world. It is the head quarters of the British Navy, an impregnable fortress, and one of our chief military and naval arsenals. Its dockyards are amongst the largest in the kingdom. **Southampton**, an important commercial port, and the great station of the Mediterranean, the E. and W. India, and the China Mail Services. It is the chief port also for the Channel Islands.

Windsor, renowned for its imposing castle, is the most stately residence of the Royal Family.

II. 5 SOUTH WESTERN COUNTIES.

- | | |
|-----------------------------|--|
| 6. WILTSHIRE .. | Salisbury (12,903), Trowbridge, Swindon, Devizes. |
| 7. DORSETSHIRE | Dorchester , ¹ Weymouth (13,259), Poole, Portland, Bridport. |
| 8. DEVONSHIRE ² | Exeter , Plymouth (68,758), Devonport, Exeter, Torquay. |
| 9. CORNWALL ³ .. | Bodmin , Truro (11,049), Redruth, Penzance, ⁴ Falmouth. |
| 10. SOMERSET .. | Taunton , Bath ⁵ (52,557), Bridgwater, ⁶ Weston-super-Mare, Wells. |

Obs. These counties are hilly and of varied character as to natural productions. **Wilt** is for the most part *agricultural*, and famous for its *bacon* and *cheese*. In many of its towns, however, various branches of *woollen manufacture* are still carried on. **Dorset** is also *agricultural*, and feeds vast flocks of sheep on its open downs. **Portland** and **Purbeck** yield valuable *building stone* and *potter's clay*. **Devonshire** is *agricultural* and *mining*. Its *cider* and *cream* are widely-known luxuries, and its *mines* are rich in *copper* and *lead*. It yields also *tin* and *silver*. **Cornwall** is chiefly a *mining* county, and is renowned for its *copper*, *tin*, *lead*, and *iron ores*. It also exports *kaolin* (China clay) all over the world. **Somersetshire** is mainly *agricultural*, but contains also *coal*, *iron*, *zinc*, and *lead*. Four of these counties, being *maritime*, have a large *seafaring population* and many manufactures connected with *naval industries*. Off the S. coasts of Cornwall and Devon there are valuable *pilchard* and *herring fisheries*. These counties are traversed by the S.W. Railway and its various branches.

NOTES ON THE TOWNS.

Salisbury (or New Sarum), 82 m. S.W. of London, has a fine cathedral, and an important corn market.

Weymouth is a sea-port, packet-station for the Channel Isles and France, and a celebrated watering-place. **Poole**, and **Bridport** are sea-ports which do a large coasting trade.

¹ Near Dorchester lies Maumbury Ring, the most perfect amphitheatre in England.

² Includes the Isle of Lundy.

³ Includes the Scilly Isles.

⁴ Birthplace of Sir H. Davy.

⁵ Bath, with Wells, forms a bishopric. The Cathedral and Palace are at Wells.

⁶ The birthplace of Admiral Blake.

Exeter, 173 m. S.W. of London, is a sea-port and city, with fine cathedral. **Plymouth**, at the mouth of the Plym, is an important sea-port, with two commercial harbours, and one naval, in which part of the British Fleet is stationed. **Devonport** contains an arsenal, docks, ship-building yards, magazines, &c. The port is protected by a magnificent artificial breakwater. **Torquay** is a favourite watering-place. **Truro** is a sea-port, and the centre of an important mining district. **Falmouth**, an excellent harbour, protected by two huge breakwaters, has a large foreign and coasting trade. **Redruth** is a large mining town. **Penzance** is a sea-port and fishing-station. **Taunton** (*Tone-town*), 145 m. S.W. of London has, still, silk and woollen manufactures. **Bath** is one of the most beautiful cities in England. It owes its origin and great repute to its saline and chalybeate springs. **Bridgewater** is a small sea-port.

III. 3 EASTERN COUNTIES.

11. **ESSEX**¹. **Chelmsford**, *West Ham* (62,919), Colchester,² Harwich.
12. **SUFFOLK**. **Ipswich**³ (43,947), Lowestoft, Bury St. Edmunds.
13. **NORFOLK**. **Norwich** (80,388), Yarmouth, King's Lynn.⁴

Obs. These counties are flat and pre-eminently *agricultural*. Much of **S. Essex** is laid out in market-gardens. Excellent wheat is grown over the whole district, and **Norfolk** barley is famous. Crape and bombasines are manufactured at **Norwich**, and silk at **Colchester**. They are also *maritime* counties, and afford much occupation of a seafaring character to a large part of the population. The G. E. Railway and its various branches intersect these counties.

NOTES ON THE TOWNS.

Chelmsford, 29 m. N.E. of London, is chiefly connected with the agricultural interests of the county. **Colchester** is a river port, and great oyster fishery. **Harwich** is the best harbour on the E. coast between the Humber and the Thames. It trades with Holland and London. **Ipswich**, 66 m. N.E. of London, is a river port with a large coasting and foreign trade. It possesses ship-building yards, flax mills, silk factories, agricultural implement factories, breweries, &c. **Bury St. Edmund's** shares the county business with the capital, and has a trade in wool, corn, butter, and cheese. **Lowestoft** is a sea-port, and chief station of the herring fishery. **Norwich**, 114 m. N.E. of London, is a river port, and an important manufacturing town; it produces woollen and silk fabrics of various kinds, carriages, machines, malt, flour, &c. It has a fine cathedral. **Yarmouth** is a sea-port and chief station of the herring fishery. **Lynn** is an important sea-port which has a large coasting and foreign trade.

IV. 8 SOUTH MIDLAND COUNTIES.

14. **MIDDLESEX**⁵ **Brentford**, *London*, Tottenham, Enfield, Edmonton.
15. **HERTFORDSHIRE** .. **Hertford**, *St. Albans*⁶ (8,298), Hitchin, Cheshunt.
16. **BUCKINGHAMSHIRE**. **Buckingham**, *Aylesbury* (3,962), Great Marlow.
17. **OXFORDSHIRE** **Oxford** (31,404), Henley, Banbury.
18. **NORTHAMPTONSHIRE** **Northampton**⁷ (41,168), Peterborough, Wellingborough.
19. **HUNTINGDONSHIRE** **Huntingdon**⁸ (4,243), St. Ives, St. Neots.
20. **BEDFORDSHIRE** **Bedford**, *Luton* (17,317), Leighton Buzzard, Dunstable.
21. **CAMBRIDGESHIRE** .. **Cambridge** (30,078), Wisbeach, Ely.

¹ Essex = "the country of the East Saxons."

² An important military station.

³ Thomas Wolsey was born here.

⁴ Sometimes called by its Latin name. Lynn Regis. Henry VIII. changed its name from "Bishop's" to "King's" Lynn.

⁵ Middlesex = "the realm of the Middle Saxons."

⁶ The site of two tremendous battles in the Wars of the Roses, viz., in 1455 and 1461.

⁷ The scene of one of the battles in the York and Lancastrian Wars, 1460.

⁸ The birthplace of Oliver Cromwell.

Obs. All these counties are principally *agricultural*, having an undulating surface and much rich and highly productive soil. **Middlesex** is *pastoral*, with nursery grounds and market gardens near London. **Hertfordshire** is *arable*, and produces wheat and barley; it does also a good malting trade. **Buckinghamshire** is entirely *agricultural*, and is divided between pastoral and arable husbandry. Its Vale of Aylesbury affords the richest pasturage. **Oxfordshire** is mainly *agricultural*, producing grain, roots, and artificial grasses. **Northamptonshire** is chiefly a *grazing* county, but grows also much grain. Stockings, boots, and lace are the principal *manufactures*. **Huntingdonshire** is entirely *agricultural*; and **Bedfordshire** also, except for its straw-plaiting and straw-hat making. **Cambridgeshire** has much waste land, but in parts yields large wheat crops and abundant pasturage. These counties are traversed by the G. E., the G. N., the M., the L. & N.-W., and the G. W. Railways.

NOTES ON THE TOWNS.

London, the Metropolis of Great Britain, is divided by the Thames, the largest part being on the N., or Middlesex side; the remainder on the S. side, in the counties of Surrey and Kent. "It is the living centre of the Empire," the place "where all its forces converge." The population of the Metropolitan *police district*—which extends from 12 to 15 m. around Charing Cross—numbered at the last census 3,883,092 souls,¹ and occupied an area of 687 sq. m. Her size, her wealth, her population, her salubrity, her river, her docks, her railways, her public edifices—especially the Houses of Parliament, Albert Hall, Guildhall, Mansion House, and Tower of London,—her grand river embankment, her churches,—notably St. Paul's and Westminster Abbey,—her magnificent bridges, her stately parks,—particularly Hyde Park, Regent's Park, the Green Park, and Battersea Park,—her manufactures, her marts, her Royal Exchange, her warehouses, her learned institutes, her hospitals, and museums,—especially the British Museum and S. Kensington Museum,—all combine in constituting London "the Queen City of the World."

St. Albans is a most ancient but decayed town. It was the site of a British settlement which was afterwards occupied by Romans. Its Abbey Church, the cathedral of the new diocese of St. Albans, is of great antiquity and interest.

Buckingham, 52 m. N.W. of London, has paper and corn mills. **Aylesbury** shares with Buckingham the county business, and is often called the capital of the county. It is becoming celebrated for its manufacture of condensed milk.

Oxford, 55 m. N.W. of London, is the seat of a Bishop's See and of one of our famous Universities. The University is renowned for its classical and metaphysical learning; it includes 21 colleges, 5 halls, and the far famed Bodleian Library. **Banbury** is noted for its "cakes" and its excellent cheese. The market-cross, of nursery celebrity, was destroyed in the reign of Queen Elizabeth by the Puritans.

Northampton, 66 m. N.W. of London, is the centre of the boot and shoe manufacture. Leather-dressing and brewing are also extensively carried on. **Peterborough** is noted for its fine cathedral, and its railway junction.

Bedford, 47 m. N. of London, the birthplace of *John Bunyan*, has a large trade with Lynn in corn, malt, coals, and timber, and manufactures straw plait. **Luton**, and **Dunstable** are the principal seats of the straw plait and straw hat manufacture.

Cambridge, 57 m. N.E. of London, one of our celebrated Universities, is famed for its mathematical learning. It includes 18 colleges, 1 hall (Trinity), the Fitzwilliam Museum, and the chapels of King's and John's. **Ely** is renowned for its splendid cathedral.

¹ This is the population lying within the limits of the *Tables of Mortality*. The population within the *Parliamentary Boundary* is 3,008,101. Within the *Metropolitan Local Management Act*, 3,264,530. Within the *London School Board District*, 3,268,008.

V. 7 WEST MIDLAND COUNTIES.

22. MONMOUTHSHIRE¹ **Monmouth**,² Newport (27,069), Tredegar.
 23. GLOUCESTERSHIRE **Gloucester**, Bristol³ (182,552), Cheltenham.
 24. HEREFORDSHIRE **Hereford** (18,347), Leominster, Ross.
 25. SHROPSHIRE **Shrewsbury**⁴ (23,406), Wenlock, Oswestry.
 26. WORCESTERSHIRE **Worcester**,⁵ Dudley (43,782), Kidderminster.
 27. WARWICKSHIRE .. **Warwick**, Birmingham⁶ (343,787), Coventry, Stratford-on-Avon.
 28. STAFFORDSHIRE .. **Stafford**,⁷ Wolverhampton (68,291), West Bromwich, Walsall, Hanley, Tipton, Lichfield,⁸ Burton.

Obs. **Hereford** alone of these counties is purely *agricultural*. In addition to the ordinary productions of such counties, Herefordshire is famed for its *apples, hops, and sheep*. **Gloucestershire** is mainly *agricultural*, but has also *iron and cloth manufactures, and coal mines*. The other five counties may be described generally as *manufacturing, mining, and agricultural*. They include the eastern part of the S. Wales, the Forest of Dean, the Warwickshire, N. and S. Staffordshire, and Coalbrook Dale *coalfields*, together with important *iron deposits*, and the *salt springs* of Droitwich. The other characteristic manufactures are *hardware, pottery* of all kinds, *annel, and carpets*. Railways, having their centres at Rugby, Birmingham, Stafford, and Shrewsbury, traverse these counties in all directions. They are mainly branches of the G. W., M., and L. and N. W. Railways.

NOTES ON THE TOWNS.

Monmouth, 130 m. W. of London, exports bark and timber. The manufactures are bar-iron, tin plates, and paper. **Newport**, on the Usk, and Monmouth and Cardiff Railway, has docks, ship-building yards, and wharves. It is chiefly engaged in the export of coal, iron, and tin. It has also iron foundries.

Gloucester, 114 m. W. by N. of London, is a river port and city, which contains one of the noblest cathedrals in England. Its manufactures, soap, pins, and cutlery, are not very important. **Bristol**, 118 m. W. of London, on the Avon, and G. W. Railway, is a city. It ranks as the third sea-port in England. Its cathedral is old, and has lately been restored. It imports W. Indian produce mainly, and exports manufactured goods. Its manufactures are numerous and important; sugar refining, soap boiling, iron and brass founding, being chief. It is still regarded as the commercial metropolis of the W. of England and S. Wales. **Cheltenham** is one of the most beautiful towns in England. Its mineral springs render it a much frequented and fashionable watering-place; and its college is rapidly rising in rank among the public schools of England.

Hereford, 144 m. W. of London, a most ancient and renowned city, is celebrated for its fine cathedral. Its October cattle and cheese fair is the largest of all English fairs.

Shrewsbury, 153 m. N.W. of London, is a most ancient town and full of precious ecclesiastical and historical remains and associations. It has a noted public school; and it produces stained glass of great repute. It is much engaged in flax and iron manufactures.

Worcester, 111 m. N.W. of London, is an ancient city, famed for its excellent china and porcelain manufactures. It has also manufactures of gloves, leather, iron wares, nails, and lace; and it possesses a fine old cathedral, in which King John was buried. **Dudley** is a chief centre of the coal, iron, lime, and glass trades. **Kidderminster** produces the best English carpets.

Warwick, 90 m. N.W. of London, is a most ancient town, abounding in historical associations, and famous for its castle, the most perfect existing speci-

¹ Formed part of the "March" up to the time of Henry VIII.

² Birthplace of Henry V. and the Old Chronicle, Geoffrey of Monmouth.

³ Birthplace of Sebastian Cabot, Chatterton, and Southey.

⁴ A.D. 1403, Henry IV. defeated the Percies at

Shrewsbury. Hotspur slain in the battle.

⁵ Here Cromwell defeated Charles II. and his Scotch partisans, A.D. 1651.

⁶ Electro-plating was invented here.

⁷ Isaac Walton was born here.

⁸ The birthplace of Dr. Johnson.

men of a feudal fortress. **Birmingham**, 100 m. N.W. of London, is one of the chief manufacturing towns in England. It produces nearly every kind of iron, steel and brass wares. Toys, fire-arms, buttons, tools, steam-engines, steel pens, papier-mâché, japanned and plated goods, are characteristic manufactures. The town is surrounded by numerous coal-mines and iron-works. **Coventry** is celebrated for ribbon and silk weaving, and for the manufacture of watches. **Stratford-on-Avon** is the birthplace of *Shakspeare*.

Stafford, 133 m. N.W. of London, manufactures boots and shoes for the London market. **Hanley** is famous for its china and pottery works. **Walsall** and **W. Bromwich** are actively engaged in the coal and iron trades. **Wolverhampton** is celebrated for its hardware goods; **Burton** for its ales, and **Lichfield** for its cathedral and its historical associations.

VI. 6 NORTH MIDLAND COUNTIES.

29. LEICESTERSHIRE .. **Leicester** (95,330), Loughborough, Ashby-de-la-Zouch.
 30. RUTLANDSHIRE .. **Oakham** (3,911), Uppingham.
 31. LINCOLNSHIRE¹ .. **Lincoln**² (36,766), Grimsby, Boston.
 32. NOTTINGHAMSHIRE .. **Nottingham**³ (86,631), Basford, Newark,⁴ Mansfield.
 33. DERBYSHIRE **Derby**⁵ (49,810), Glossop, Chesterfield, Litchurch.
 34. CHESHIRE **Chester**, **Stockport** (53,014), Birkenhead, Macclesfield.

Obs. Rutland, the smallest county in England, and *Lincolnshire*, are almost exclusively *agricultural*. The other four counties, though principally *agricultural*, have important *mining* and *manufacturing* districts also. *Rutlandshire* barley; *Lincolnshire* wheat, sheep, and horses; *Leicestershire* sheep and cheese (Stilton); and *Cheshire* cheese, are all famed for their excellency. The G. N., the M., and the L. N. W. Railways and their branches intersect these counties in all directions.

NOTES ON THE TOWNS.

Leicester, 97 m. N.W. of London, has an important agricultural and wool market. It is a great centre of hosiery, lace, and elastic web manufactures. **Loughborough** is also a stocking and lace manufacturing town.

Lincoln, 132 m. N.W. of London, possesses one of the most beautiful and imposing cathedrals in England. **Boston**, on the Witham, and **Grimsby**, on the Humber, do a large trade with the ports of N. Europe. Grimsby possesses magnificent docks.

Nottingham, 124 m. N.W. of London, is the centre of the lace and hosiery trade. Silk throwing and cotton spinning mills, bleaching, and dyeing are likewise characteristic branches of the Nottingham industries.

Derby, 126 m. N.W. of London, has for its staple trade silk-throwing and silk-twisting. Porcelain, china, steam-engines, and lace, are largely manufactured here. Within an easy and pleasant railway journey of Derby lie those celebrated watering-places, and places of resort, **Matlock**,⁶ **Buxton**, and **Bakewell**.

Chester, 185 m. N.W. of London, a walled city of great antiquity and a river port, has iron-ship building yards, timber yards, saw mills, tobacco, and snuff manufactories. It exports large quantities of cheese. Its cathedral is very ancient but not celebrated for its beauty. **Stockport**, on the Mersey, has cotton, silk, woollen, brass, iron, and brush manufactories. **Birkenhead**, opposite Liverpool, 193 m. N.W. of London, is a sea-port which has rapidly risen to a first rank in commercial importance. **Macclesfield** is the headquarters of English silk-weaving.

¹ The largest county in England, after Yorks. The diocese of Lincoln is the largest in England.

² Lincoln Cathedral contains the huge bell called "Great Tom."

³ The birthplace of Gilbert Wakefield, and Kirke White. In the vicinity is Sherwood Forest, and Newstead Abbey.

⁴ King John died here.

⁵ The first English silk mill was built here,

and here Arkwright and Strutt first wove calico. Derby is the native town of Linacre the physician, Richardson the novelist, and Hutton, the topographical historian.

⁶ There are several natural caverns of large size and great interest near Matlock. Chatsworth, the sumptuous palace of the Duke of Devonshire is 10 miles distant.

VII. 6 NORTHERN COUNTIES.

35. LANCASHIRE **Lancaster**,¹ *Liverpool* (493, 405), Manchester, Salford, Preston, Oldham, Bolton, St. Helens.
36. YORKSHIRE **York**, *Leeds* (259, 212), Sheffield, Bradford, Hull, Huddersfield, Halifax, Middlesborough.
37. DURHAM **Durham**, *Sunderland* (98, 242), Gateshead, S. Shields, Stockton upon-Tees, Darlington.
38. NORTHUMBERLAND **Newcastle** (128, 443), Tynemouth, Berwick-upon-Tweed.
39. CUMBERLAND **Carlisle** (31, 048), Whitehaven, Penrith, Workington.
40. WESTMORELAND .. **Appleby**, *Kendal* (13, 446), Kirkby Lonsdale.

Obs. Of these counties **Lancashire** is the *manufacturing* and *mining* county *par excellence*. The characteristic productions are cotton goods, coal, and iron. **Yorkshire**, the largest county in England, is divided into three "Ridings,"² called respectively N., W., and E. The N. and E. Ridings are principally *agricultural*, and famed for their excellent pastures and their valuable breeds of horses. Being *maritime* also, numbers of their people follow seafaring pursuits. In the N. Riding, moreover, iron is mined and manufactured, and a good trade is done in the manufacture of jet ornaments. The W. Riding is a great *manufacturing* and *mining* hive, and the home, as it were, of woollen and worsted fabrics, of iron, cutlery, and hardware. **Durham** and **Northumberland** are *mining*, *manufacturing*, *agricultural*, and *maritime* counties. Coal, iron, lead, and glass are the distinguishing productions. **Cumberland** and **Westmoreland** are famous for their lake and mountain scenery, for their excellent cattle and wool, and for their rich and varied yield of metals and minerals. The finest plumbago in the world is found in Cumberland.

NOTES ON THE TOWNS.

Lancaster, 230 m. N.W. of London, is a sea-port town. It has also manufactures of silk and linen. Its castle is an imposing looking structure, and is used now as a gaol, county court house, and penitentiary. **Manchester**, 183 m. N.W. of London, on the Irwell, is the centre of numerous Railways. It was made a Bishop's See in 1847, with the collegiate church for a cathedral. It is the metropolis of the cotton manufacture, and perhaps the greatest manufacturing city in the world. **Oldham**, **Preston**, and **Bolton**, are large cotton-spinning and weaving towns. **Liverpool**, on the Mersey, 185 m. N.W. of London, is the second sea-port in Great Britain. It trades chiefly with America, importing raw cotton. It exports cotton fabrics, emigrants, and the manufactures generally of Lancashire, W. Yorkshire, and Staffordshire. It is now a Bishop's See. **St. Helen's** is celebrated for its plate-glass and copper works, its coal mining, and its bottle factories.

York, 198 m. N.W. of London, is the metropolis of the ecclesiastical province of York, and the second city in England. It is one of the most ancient and famous cities in the Empire, and its minster is a structure of unrivalled grandeur and interest. The city is surrounded by walls, which are pierced by 10 gateways. It possesses an immense castle and numerous Roman antiquities. **Leeds**, on the Aire, and on the L. N. W.; G. N.; Midland; and other railways, is in size the fourth town in England. It is the metropolis of the English woollen and cloth trade. **Bradford**, **Halifax**,³ and **Huddersfield**, are associated with Leeds in the great woollen manufactures. **Middlesborough** is noted for its extensive iron-works and potteries; **Sheffield** for cutlery and hardware. **Hull**, on the N. side of the Humber, is the fourth commercial port of G. Britain. It has an extensive trade with N. Europe.

Durham, 258 m. N. by W. of London, is famed for its cathedral, castle, and university. It is also intimately connected with the important collieries in its vicinity. **Sunderland**, on the Wear, is one of the principal coaling ports in

¹ English names involving the term "Caster" or "Chester" belong to places which were once Roman camps (Latin, *castra* = "a camp"), e.g., Lancaster = "the camp on the Lune."

² The term *Riding* is a corruption of the word *Trithing* = a third part or division. It is not

certain when the division into the three Ridings was made.

³ *Halifax* (= "Holy tress"), so called from a tress of the Virgin's hair, which was for a long time here an object of superstitious veneration.

England, and has an extensive trade in ship-building. **South Shields**, and **Stockton**, are ports with large docks, and a constantly growing trade. **Darlington** is a great iron, steam-engine, and worsted manufacturing town. **Newcastle** (so called from the castle built by Robert, son of William I.), 275 m. N. of London, is one of the oldest and most important ports in England. It is the metropolis of the northern coal trade, and has large glass and engine manufactories. As a port, it ranks next after Hull. **Tyne-mouth**, belongs to the port of Newcastle, with which it is closely connected by river and rail. **Berwick**, the most northern town in England, is a sea-port and manufacturing town. Steam-engines, mill machinery, and linen fabrics are the chief productions. **Carlisle**, 300 m. N.W. of London, is a cathedral city and commercial town. **Whitehaven**, and **Workington**, are considerable coal exporting ports.

VIII. 12 WELSH COUNTIES.

- | | |
|------------------------|---|
| 41. ANGLESEA | Beaumaris , <i>Holyhead</i> (5,916). |
| 42. CARNARVONSHIRE .. | Carnarvon ¹ (9,449), Conway, Llandudno, Bangor. |
| 43. DENBIGHSHIRE... | Denbigh , <i>Wrexham</i> (8,576), Ruthin. |
| 44. FLINTSHIRE | Mold , <i>Flint</i> (4,200), Rhyl. |
| 45. MERIONETHSHIRE .. | Dolgelly , <i>Towyn</i> (3,307), Bala. |
| 46. MONTGOMERYSHIRE.. | Montgomery , <i>Welshpool</i> (6,983), Newtown. |
| 47. CARDIGANSHIRE .. | Cardigan , <i>Aberystwith</i> (6,898), Lampeter. |
| 48. RADNORSHIRE | Presteign , <i>New Radnor</i> (2,190), Knighton. |
| 49. BRECKNOCKSHIRE .. | Brecknock (5,845), Brynmawr. |
| 50. GLAMORGANSHIRE .. | Cardiff , <i>Merthyr-Tydfil</i> (51,949), Swansea, Aberdare. |
| 51. CARMARTHENSHIRE .. | Carmarthen , <i>Llanelli</i> (14,973), Llandilo. |
| 52. PEMBROKESHIRE .. | Pembroke (13,704), Haverfordwest, Tenby, Milford. |

Obs. Great portions of the Welsh counties consist of uncultivated mountain districts which yield a scanty pasturage for sheep, ponies, and black cattle. The valleys and low lands have some fertile soil, which produces good barley and oats. The counties are principally *mining* and *manufacturing*, and nine of them are maritime. The *mineral* products are very valuable, consisting chiefly of coal, iron, slate, lead, copper, and silver. The principal *manufactures* are iron, flannel, coarse cloth, and gloves.

NOTES ON THE TOWNS.

Holyhead, on the island of that name, is the nearest British port to Dublin, with which it is connected by submarine telegraph. It is also the packet-station on the main route from London to Dublin.

Carnarvon is chiefly famed for its castle, the birthplace of Edward II. **Bangor**, on the Menai Strait and the L. N. W. Railway, has a cathedral and a bishop's palace, and there are some valuable slate quarries in its vicinity. **Conway** is a walled sea-port town, with remains of a fine castle.

Denbigh is engaged in woollen and leather manufactures. **Wrexham**, on the Shrewsbury and Chester Rlwy., has iron-works, paper mills, coal and lead mines.

Mold is in the vicinity of valuable lead and coal mines, and of Druidical and Roman remains. **Flint**, a sea-port on the Chester and Holyhead Railway, exports the coal and lead from the neighbouring mines. **Rhyl** is a watering and sea-bathing town of rising fame.

Welshpool, on the Severn, is the chief mart for the woollen manufactures of North Wales.

Cardigan, a sea-port, which exports butter, slates, and oats; and imports coal, timber, and limestone. **Lampeter** is a collegiate town where the Welsh clergy are educated.

Cardiff, the port of *Merthyr Tydfil*, has magnificent docks and iron-ship-building yards. It is rapidly rising in importance. **Merthyr Tydfil** is the largest town in Wales, and the focus of the S. Wales iron and coal trades.

¹ Carnarvon Castle was built by Edward I. 1283 to overawe the Welsh, whom he had defeated

Swansea, the head-quarters of the copper smelting, has extensive potteries, collieries, and brass works.

Carmarthen has a large coasting trade, and exports lead-ore, slates, and timber. **Llanelly** has important copper and iron-works, which produce largely for exportation. **Llandilo** is rich in iron and coal mines, and has flannel manufactures.

Pembroke has a large Government Dockyard, with ship-building slips, public offices, &c. **Haverfordwest** is a river port, with dockyard, quays, &c. It is largely occupied in the export of coal and agricultural produce. **Milford**, on the N. side of the Haven, is a sea-port which trades with Ireland, America, and the Baltic. **Tenby** is a sea-port, and much frequented watering-place of S. Wales.

INDUSTRIAL PURSUITS.—The industries of England embrace *Agriculture, Manufactures, Mining, and Commerce.*

Agriculture includes the growth of grain, fodder, fruit, and other products of the soil, and cattle rearing ; it employs about a ninth part of the producing population.

Obs. The chief agricultural products are wheat, barley, oats ; potatoes, turnips, beans, and peas ; apples, pears, plums, and cherries ; cattle, sheep, and domestic fowls and animals.

Manufactures embrace the production of textile fabrics, art and mechanic objects, food and drinks, and articles made from animal and vegetable substances ; and employ about one-fourth of the producing population.

Obs. 1. The chief **Textile Fabrics** are

1. *Cotton goods*, made principally at Manchester, Blackburn, Bolton, Bury, Preston, Wigan, Oldham, Rochdale, and Stockport. Hose and cotton lace are made at Nottingham and Leicester.

2. *Woollen goods*, made chiefly at Leeds, Huddersfield, Halifax, Wakefield, and Bradford, in Yorkshire ; at Trowbridge and Bradford, in Wilts ; and at Stroud and Frome, in Gloucester and Somerset. Carpets are made at Kidderminster, Halifax, and Axminster ; worsted stockings, at Leicester ; flannels, at Rochdale.

3. *Silk goods*, made mostly at Spitalfields, Macclesfield, Manchester, and Leeds ; ribbon, at Coventry ; and silk lace, at Nottingham and Leicester.

4. *Linen goods*, manufactured chiefly at Leeds, and in the counties of Lancaster, Dorset, Durham, and Salop.

Obs. 2. The chief **art and mechanic objects** are

1. *Machinery*, which is made principally at Newcastle, Doncaster, Leeds, Birmingham, Coalbrook Dale, Low Moor, and Bowling. Cotton-spinning machinery is produced in Lancashire ; lace and hosiery machines, at Nottingham and Leicester.

2. *Ship-building*, which is largely carried on at Portsmouth, Plymouth, Chatham, Sheerness, and Milford, where the chief naval dockyards are ; and in London, Liverpool, Hull, Newcastle, and Sunderland, in private yards.

3. *Hardware and cutlery*, made chiefly at Sheffield, Birmingham, Dudley, Wolverhampton.

4. *Leather*, which is tanned principally at Bermondsey (London).

5. *Books*, which are printed and bound in London and Liverpool.

6. *Glass*, which is made chiefly at Smethwick (Birmingham), Newcastle, South Shields, and St. Helen's.

7. *Beer*, which is brewed in London, Burton-on-Trent, Alton, and Romford.

Mining is mostly occupied in raising coal, ironstone, lead, tin, salt, and copper ; and with the quarrying of building stone and slate.

Obs. The principal English coalfields and iron yielding regions are given on p. 29, note 2.

Commerce is occupied in buying, selling, transporting, and storing the natural

and manufactured produce of the country. The commerce of England far exceeds that of any other country, and extends to all the trade marts in the civilised world.

Obs. 1. England is deficient in respect chiefly of cotton, corn, sugar, wool, tea, silk, timber, wine and spirits. These articles, therefore, constitute the bulk of our **Imports**.

Obs. 2. The **Exports** consist almost wholly of manufactured goods—textile fabrics of all sorts, machinery, hardware, cutlery, leather, beer, articles of clothing, &c., and coal.

Obs. 3. The principal *commercial ports* of England are London, Liverpool, Bristol, Hull, Newcastle-on-Tyne, Sunderland, and Southampton.

COMMUNICATIONS.—Every species of inter-communication is highly developed in England. Turnpike-roads,¹ railroads, tram-roads, navigable rivers,² and canals, traverse and intersect the country in all directions; and every town, village, and hamlet, of any importance at all, is now in telegraphic and postal communication with the metropolis.

Obs. 1. **Railways** form the main arteries of inland commerce and traffic. At the end of 1877 England had 12,113 m. of railway open, i.e. 1 m. of railway to every 5 sq. m. of area.

Obs. 2. **Canals** have been, to some extent, superseded by railways, but they have not by any means been rendered useless. They have an aggregate length of 2,100 m., and much traffic is still done through them.

Obs. 3. **Telegraphic communications** are being daily multiplied to a vast extent. At the beginning of 1877 there were no less than 110,220 m. of telegraph wire at work in the United Kingdom.

GOVERNMENT.—The form of government of the United Kingdom is a “*Limited Monarchy*.”³ The legislative authority is vested in the Sovereign and the Parliament. Parliament is composed of the Houses of Lords and Commons.

Obs. 1. There are said to be “Three Estates of the Realm,” viz., the Lords Spiritual, the Lords Temporal, and the Commons; and no law can be enacted without the consent of these three estates and that of the Crown.

Obs. 2. By law, no parliament can last *more* than seven years; but it may expire at any time within that period.

RELIGION.—The *Religion* of the English people is *Christian*: Protestant-Episcopacy is the *established* form of it: but there is perfect religious equality.

EDUCATION.—The State provides that school accommodation and means of *elementary instruction* shall be placed within reach of every child in England. School Boards are invested with the power of compelling parents to give all children between the ages of *five* and *thirteen* the advantages of education. *Higher education* is amply provided for by our public and private schools, educational institutions, colleges, and universities.

¹ There are 25,000 m. of turnpike road, and about 100,000 m. of cross road.

² There are above 2,000 m. of navigable rivers.

³ **Monarch** = a sole ruler. *Monarchy* = a state ruled over by a monarch. A *Limited Monarchy*

= a state in which the power of the monarch is limited by laws which have been handed down from age to age, and the nobility and commoners take part in the government.

2. SCOTLAND.¹

PHYSICAL GEOGRAPHY.

Latitude. Between 54° 38' and 60° 50' N. *Longitude.* Between 1° 46' and 7° 44' W.²
Area. 30,463 sq. m.

Obs. Scotland, or North Britain, is the N. portion of Great Britain. It is extremely irregular in figure, and so broken up by headlands jutting far into the sea, and by arms of the sea penetrating deeply into the land, that the great mass of the country is not more than 40 m. from salt water. Its greatest *length* from N. to S. is 275 m., its greatest *breadth* from E. to W. is 146 m. The *extreme points* of the mainland are Dunnet Head on the N., the S. point of the Mull of Galloway on the S.; Buchan Ness on the E., and Ardnamurchan Point, on the W.

POSITION AND BOUNDARIES.—Scotland forms the N. part of Great Britain, and lies W. of the central W. coast of Europe. It is bounded on the

N. and W. by the Atlantic. E. by the North Sea. S. by England.

Obs. The boundary line between England and Scotland runs along the Liddell, the Cheviot Hills, and the Tweed, and, at its E. extremity, along a conventional line a few miles N. of the Tweed.

COASTS.—The coasts of Scotland are bold, precipitous, and rocky, and deeply indented by numerous arms of the sea, especially on the W. side. This gives to Scotland the enormous length of 2,506 m. of *coastline*, or 1 m. of coast to 12 sq. m. of area. Much of it is, however, of a wild and dangerous character and utterly unfit for commercial purposes. The features on these coasts to be chiefly noted are

1. The **Capes**.—St. Abb's Head, Fife Ness, Buddon Ness, Buchan Ness, Kinnaird Head, Tarbat Ness, and Duncansby Head, on the E.

Dunnet Head, Strathly Head, and Cape Wrath, on the N.

Stoir Head, Ru Rea, Ardnamurchan Point, and Mull of Cantyre, on the W. Mull of Galloway, and Barrow Head, on the S.W.

2. The **Inlets**.—The Firths³ of Forth, Tay, Moray, Cromarty, Dornoch, and Sinclair Bay, on the E.

Thurso Bay, Kyle⁴ of Tongue, and Loch⁴ Eriboll, on the N.

Lochs Enard, Broom, Linnhe, and Fyne, and the Firth of Clyde, on the W. The Bays of Luce, Wigtown, and Kirkeudbright, on the S.W.

3. **Straits, Channels, and Sounds**, the best known of which are *Pentland Firth*, between the mainland and the Orkney Islands on the N. The *Minch*, between the mainland and the isle of Lewis; the *Little Minch*, between the isle of Skye and the isles of Harris and N. Uist; *Sleat Sound*, between the mainland and the isle of Skye; *Sound of Mull*, between the mainland and the isle of Mull; the *Firth of Lorn*, between the mainland and S.E. Mull; the *Sound of Jura*, between the mainland and the isle of Jura; *Bute Sound*, between the islands of Bute and Arran; *Kilbrennan Sound*, between the isle of Arran and the Mull of Cantyre;⁵ and the *North Channel*, between Scotland and Ireland, on the W.

Obs. The **North Channel** connects the open Atlantic with the Irish Sea, and is about 14 m. broad between the Mull of Cantyre and Fair Head, on the N.E. coast of Ireland.

¹ Scotland—"the land of the Scots." The Scots were an Irish tribe who conquered the Albins, or Caledonians, in the 6th century.

² Firth = *Firth* = Scandinavian *Fjord* = "an inlet of the sea," ³ Kyle = "a ferry."

⁴ Loch (Gaelic), generally applied to sea inlet on the W. coast of Scotland, as well as to inland freshwater lakes.

⁵ Mull = *Maol* = "a headland." The Mull of Cantyre rises 1,000 ft. above the sea.

ISLANDS.—The islands of Scotland being very numerous—more than 700—it is useful to observe that they form five groups, viz.,

1. The **Shetland Isles**, an archipelago of about 100 islands and islets. Only 24 of them are inhabited. They lie about 50 m. N.E. of the Orkney Islands. Their aggregate area is about 935 sq. m.; population, 31,608. The coasts are high, rocky, and much indented; the surface is hilly, bleak, and bare, and reaches its culminating point in *Mt. Rona* (1474 ft.) in the N. of Mainland.¹ The soil is peaty, the climate moist and genial, and the chief productions are cattle, sheep, and ponies.² The neighbouring seas abound in fish. The people are of Norwegian descent. The chief islands are Mainland,—the largest—Yell, Unst,—the most fertile—Fetlar, Whalsey, and Bressay.

Obs. Fair Island,³ about midway between the Shetlands and the Orkneys, is generally classed with the Shetland Islands for all political purposes.

2. The **Orkney Islands**, about 70 in number, which lie off the N.E. coast, and are separated from it by the Pentland Firth. Their total area is about 324 sq. m. Their population is 31,274, although many of them are not inhabited. Their surface is undulating in the interior, and low on the E. and N. shores. The climate is mild, and the temperature equable. The chief productions are sheep, cattle, swine; oats, barley, potatoes, and turnips; and the fisheries are very valuable. The chief islands are Pomona, or Mainland,—the largest—South Ronaldsha, Hoy, Stronsa, Rowsa, Sanda, and Weetra.

3. The **Outer Hebrides**, or **Western Isles**, which are separated from the mainland by the Minch, and from the Inner Hebrides by the Little Minch. The principal islands are Lewis,—the largest—Harris, N. Uist, Benbecula, S. Uist, and Barra. The soil of these islands is poor and peaty, includes large tracts of moorland, and is not well fitted for cultivation.

4. The **Inner Hebrides**, which lie between the mainland and the southern half of the Western Isles. The chief of them are Skye,—the largest—Rona, Raasay, Scalpa, Canna, Rum, Eigg, Coll, Tiree, Mull, Staffa,⁴ Icolmkill or Iona,⁵ Jura, Islay, and Colonsay. Most of them are rugged and mountainous, and remarkable for their basaltic formation. Their chief products are barley, wheat, cattle, and fish.

5. **Islands in the Firth of Clyde**, which are the large islands Bute, and Arran, and the islets Great and Little Cumbay. They are not generally fertile, but they yield pasture, barley, and oats.

SURFACE.—The surface of Scotland is, for the most part, mountainous and rugged, and, comparatively speaking, sterile. The plains and valleys are neither numerous nor extensive, nor without uncultivable tracts of moss and moor. A line formed by the Grampians, Loch Lomond, and the Firth of Clyde, divides the country into two great physical regions; that on the N. side being called the Highlands, that on the S. side, the Lowlands. The Highlands are again naturally divided by the deep valley of Glenmore, which crosses the country diagonally between Moray Firth, and Loch Linnhe. While the Lowlands include a region in their S. part which is strictly mountainous. The most important surface features are the

¹ Mainland is the name given to the chief island of the Shetland, Orkney, and Hebrides groups.

² The Shetland ponies, called "Shelties," are small, hardy, and spirited, and, for their size, strong and active. They are bred in large numbers, but are left to provide for themselves.

³ The Admiral of the Spanish Armada, the Duke of Medina Sidonia, was wrecked on this

island in 1588.

⁴ Staffa (—"the isle of staves") is famous for its wonderful basaltic pillars and cavern, called "Fingal's Cave."

⁵ Iona, or Icolmkill (or I-columb-kill), was long celebrated as the chief seat of learning in the North. Its famous abbey was founded by St. Columba, an Irish Saint, in the 6th century.

1. **Mountains**, which, with the principal details connected with them, are given in the following Table:—

REGIONS.	MOUNTAIN RANGES.		CHIEF SUMMITS.	
	NAMES.	POSITION AND DIRECTION.	NAMES.	HEIGHT IN FEET.
I. THE NORTH HIGHLAND REGION.	Ben ¹ More ²	N.W. & S.E. from Cape Wrath to Ardnamurchan Point.	Ben Atton ³ ..	4,000
			Ben Dearg ³ ..	3,551
II. THE SOUTH HIGHLAND, OR GRAMPIAN, REGION.			Ben Wyvis ³ ..	3,422
			Ben More ³ ..	3,235
	Cairn Gorm ³	Branching towards the N.E. from the Central Grampians.	Ben Macdui ³ ..	4,296
	Central Grampians	E. & W. from near the E. Coast to the head of Loch Linnhe.	BEN⁴ NEVIS	4,406
III. THE NORTH LOWLAND, OR INTER-GRAMPIAN AND CHEVIOT, REGION.	Southern Grampians	N.E. & S.W. from the middle valley of the Tay to the W. shore.	Ben Lawers..	3,984
	Sidlaw Hills....	N.E. & S.W., North of and parallel to the Firth of Tay.	Kingseat....	1,255
	Ochill Mountains	N.E. & S.W., between the Tay and Forth.	Benclough ..	2,352
	Pentland Hills..	N.E. & S.W., between the Firth of Forth and the upper valley of the Clyde.	East Carnethy Hill }	1,806
IV. THE CHEVIOT REGION.	Lammermuir Hills	N.E. & S.W., between the Pentland Hills and the river Tweed.	Says Law ..	1,753
	Cheviot Hills ..	E. & W. between England and Scotland.	Cheviot Peak	2,668
	Lowther Hills ..	S.E. & N.W., a continuation of the Cheviot Hills.	Broad-Law ..	2,741

Obs. 1. The North Highland Region is, for the most part, wild, rocky, and desolate, a sterile wilderness, in fact, covered with mountains and boggy moorlands. But portions of it have been ascertained to be wealthy in minerals.

Obs. 2. The South Highland, or Grampian, Region, is separated from the North Highland Region by Glenmore (*The Great Glen*), which extends entirely across the country from Moray Firth in the E., in a S.W. direction, to Loch Linnhe on the W., and is traversed by the Caledonian Canal. A large portion of this Grampian Region is a bleak, rocky, sterile, and inhospitable desert.

Obs. 3. The North Lowland Region is the great granary of Scotland.

Obs. 4. The Cheviot Region yields excellent herbage for feeding sheep, though it is a district of bleak and rugged mountains.

2. **Plains**.—Owing to the peculiar disposition of the mountains in Scotland, the plains are not extensive. The chief of them are

a. The *Plain of Caithness*, in the N.E., which includes the greater part of the county of Caithness. It is treeless and flat or undulating, comprehending vast tracts of moorland which produce very little but moss and stunted heath. The level tracts along the watercourses are tilled.

b. *Strathmore (The Great Valley)*, between the Grampians and the Sidlaw

¹ Ben (=pen) = "a mountain" or "hill."
² More = "great." Ben More = "Great Mountain." Ben Atton = "Rush Mountain." Ben Dearg = "Red Mountain." Ben Wyvis = "The Mountain of Terror." Ben Macdui = "The Black Bear Mountain."

³ Cairn Gorm (Gael. Cairn = "a stony hill,"

and Gorm = "blue"), = "Blue Mountains." A species of rock crystal of a yellowish-brown colour occurs in this range, and is called from it "Cairngorm." The range is also called the "Northern Grampians."

⁴ Ben Nevis (= "The Mountain of Death") is the highest Mountain in Great Britain.

and Ochill Hills, which is nearly 100 m. *long*, and from 5 m. to 10 m. *broad*. It is the largest plain in Scotland, and the greater part of it is highly cultivated and yields large crops of grain and potatoes.

c. The *Carse*¹ of *Gowrie*, between the Tay and the Sidlaw Hills, which is one of the most beautiful and prolific tracts in Scotland. It produces fruit, timber, and grain in great abundance and of excellent quality.

d. The *Plain of the Forth and Clyde*, between the rivers so called, which is the central and most depressed portion of the great plain that lies between the Grampians and the Lowther Hills, and is of such fertility that a popular adage says of it: "that a loop of the Forth is worth an earldom in the north."

DRAINAGE.—The main watershed of Scotland runs from N. to S. and, for the most part, near the W. coast, dividing the country into two unequal drainage slopes, the longest of which turns towards the North Sea, the shortest and steepest towards the Atlantic Ocean. Very few of the Scotch rivers are navigable to any great distance inland, but several of their estuaries are large and form valuable natural harbours. The chief drainage agents are the

1. **Rivers.**—The most important of which are those flowing down

a. The *Eastern Slope*, to the North sea, viz., the Tweed, Forth, Tay, N. Esk, Dee, Don, Deveron, Spey, Findhorn, Ness, and Oykill.

b. The *Western Slope*, viz., the Liddell, Annan, and Nith—falling into the Solway Firth—the Ayr, and Clyde—into the Firth of Clyde.

Obs. 1. The Tweed rises in the Lowther Hills, flows N. and E. over a course of 96 m., and falls into the North Sea. It is rapid, and not navigable above Berwick. Its chief *tributaries* are the Ettrick with its affluent the Yarrow, the Teviot, and Till, on the right bank; and the Blackadder with its affluent the Whiteadder, on its left bank. The salmon fisheries of the Tweed are very valuable.

Obs. 2. The Forth rises in the S. Grampians, flows E. for 60 m., and falls into the Firth of Forth. It receives on its left bank the *tributaries* Teith, and Leven.

Obs. 3. The Tay, the largest river in Scotland, rises in the S. Grampians, and flows over a course of 90 m. into the Firth of Tay. It drains an area of 2,090 sq. m., is navigable up to Perth, 8 m. from its mouth, and receives the *tributaries* Almond, and Earn on its right bank; Lyon, Tummel, and Isla on its left bank.

Obs. 4. The Clyde rises in the Lowther Hills, flows N.W. for 90 m., and falls into the Firth of Clyde. It is navigable from its mouth to Glasgow, 12 m., and is, in a commercial point of view, the most important river of Scotland.

2. **Lakes.**—The Lakes of Scotland form a distinctive feature of its physical geography. They are not large, but they are very numerous and of surpassing beauty. The most important of them are

a. *Loch Lomond*, at the head of the Firth of Clyde, which is the largest lake in Great Britain. It has been said to be "unquestionably the pride of our lakes—incomparable in its beauty as in its dimensions, exceeding all others in variety, as it does in extent and splendour, and uniting in itself every style of scenery which is found in the other lakes of the Highlands."

b. *Loch Katrine*, which is in the upper valley of the Teith, and near Loch Lomond. Its scenery, though undeniably beautiful, is inferior to that of Loch Lomond. This lake is the scene of the events related in Sir Walter Scott's "Lady of the Lake."

c. *Loch Awe*, which lies N.W. of Loch Lomond and near the W. coast: it is one of the largest and most beautiful of the Scottish lakes.

d. *Loch Tay*, in the centre of the country, and in the channel of the Tay.

e. *Loch Ness*, in Glenmore, which is surrounded by densely wooded mountains, and is never frozen. It forms the E. extension of the Caledonian Canal.

¹ *Carse*—Alluvial soil in a state of cultivation. Google

Obs. Other Scotch Lakes of less renown than those above named, are :

1. Near the W. Coast, *Assynt, Marce, and Morar*. 2. In the centre *Laggan, Ericht, Rannoch, Earn, and Vennachar*. 3. Near the E. Coast, *Loch Leven*.

CLIMATE.—Scotland enjoys a climate remarkably salubrious and particularly favourable to the development of physical and mental energy. It is more rigorous than that of England and is incapable of maturing many of the fruits and plants which come to perfection there ; yet, from the proximity of most parts of the country to the sea, the climate of Scotland is more temperate and genial than is the average climate of the same latitudes.

PRODUCTIONS.—These are chiefly of the same kinds as are found in England. But from Scotland come the *Shetland pony*, and the *Shetland sheep*. The *feathered tribes* embrace several species of *eagles*, the *capercailzie*, the *black cock*, and *grouse*, while vegetation includes a larger proportion of Alpine species than are found in England. The most important *mineral productions* are coal,¹ iron, building stone, and roofing slate.

PEOPLE AND LANGUAGES.—The Highlanders are of *Celtic* origin and still speak Erse or Gaelic, the language of the aboriginal Celts. The Lowlanders are of *Teutonic* origin and speak a dialect of the English language. The inhabitants of Caithness, and the islanders of the Orkneys, the Shetland Isles, and the Northern Hebrides are of *Scandinavian* extraction.

POLITICAL GEOGRAPHY.

POLITICAL DIVISIONS.—Scotland and its numerous islands are divided into 33 counties. These, with a few exceptions, take their names from the chief towns in each. Twenty-four of them are *maritime*, and nine *inland* counties. Certain districts all over the country are known by designations still older than the county names.²

I. 10 NORTHERN COUNTIES.

1. SHETLAND ³	Lerwick (3,516).
2. ORKNEY ³	Kirkwall (3,436), Stromness.
3. CAITHNESS	Wick (8,145), Thurso, and Castletown.
4. SUTHERLAND	Dornoch, Golepie (1,074).
5. ROSS ⁴ AND CROMARTY	Dingwall, Stornoway (2,498).
6. INVERNESS ⁵	Inverness (14,510), Fort William.
7. NAIRN	Nairn (3,751).
8. ELGIN, ⁶ or MORAY * ..	Elgin (7,445), Forres.
9. BANFF	Banff (5,015), Buckie.
10. ABERDEEN	Aberdeen (88,109), Peterhead, and Fraserburgh.

¹ The Scotch coal stretches across the country from sea to sea, between the Firths of Tay and Clyde, and forms a series of detached coal-fields, of which the following are the chief: 1. The Fifeshire. 2. The Clackmannan. 3. The Glasgow. 4. The Ayrshire. 5. The Lothians. 6. The Border coal-fields.

² They are marked in the lists by an * asterisk.
³ These counties are composed of the two archipelagos, from which they are named. They lie to the N.E. of the mainland, and consist of some

170 islands and islets, many of which, however, are uninhabited. The people are of Norse extraction, and speak English.

⁴ Extends from the E. to the W. coast, and includes Lewis, the largest of the Hebrides.

⁵ The largest county in Scotland. It includes the islands Skye, Harris, N. and S. Uist, Benbecula, &c.

⁶ So fertile that it was formerly called "The Garden of Scotland."

Obs. These counties are, with the exception of a low-lying strip of land straight along the E. coast, mountainous, bleak, infertile, and interspersed with numerous tracts of moorland. The chief productions of the mountainous region and its coasts are cattle, fish (herrings and salmon), timber, granite, from Aberdeen, and knitted work, from the Shetland Isles. The lowlands along the E. coast being fertile and fairly well cultivated, produce barley, oats, wheat, and bere. The whole district is thinly populated, having but 45 persons to the square mile.

NOTES ON THE TOWNS.

Lerwick, the chief town in the Shetland Isles, and most northerly sea-port in Great Britain, is a fishing station of some importance.

Kirkwall, the capital of the county, and chief town in the Orkney Islands, is a sea-port and does a large export trade in fish, tallow, hides, &c.

Wick is a sea-port, and the metropolis of the Scotch herring fishery. **Thurso** is an old fishing port, and the most northerly town on the mainland.

Stornoway, in Lewis, is a large fishing station, and the most considerable town in the Hebrides.

Inverness, the old capital of the Highlands, and the most populous town N. of Aberdeen, is an important sea-port, and manufactures linen and woollen stuffs. Six miles from Inverness is the field of **Culloden**, where Charles Stewart was utterly defeated in 1746. **Portree**, a sea-port and fishing station, is the chief town of Skye and the adjacent islands.

Nairn, a sea-port, and most salubrious watering-place, is on the Moray Firth. It is called the "Brighton" of North Scotland.

Banff is a small sea-port, which exports grain, cattle, fish, and pork, chiefly to the London market.

Aberdeen is an important sea-port, a university town, a well-built and handsome city, distinguished alike by its commerce, its manufactures, and its literature. It exports cattle, fish, and granite, largely. It manufactures woollen, linen, and cotton goods, ships and machinery. **Balmoral**, the Highland residence of the Queen, is 45 miles W. of Aberdeen. **Peterhead**, a thriving sea-port to the N. of Aberdeen, is the head-quarters of the Greenland whale and seal fisheries.

II. 10 CENTRAL COUNTIES.

- | | |
|------------------------------------|--|
| 11. KINCARDINE, OR MEARN * | Stonehaven (3,396), Laurencekirk. |
| 12. FORFAR, OR ANGUS * | Forfar, ¹ Dundee (118,977), Arbroath, Montrose. |
| 13. PERTH | Perth (25,606), Crieff, Blairgowrie. |
| 14. ARGYLL * | Inverary, Campbeltown (6,688), Dunoon. |
| 15. BUTE * | Rothsay (7,808), Millport. |
| 16. DUMBARTON, * OR LENNEX * | Dumbarton (11,423), Kirkintilloch. |
| 17. STIRLING | Stirling (14,279), Falkirk, Bannockburn. |
| 18. CLACKMANNAN * | Clackmannan, Alloa (9,362), Dollar. |
| 19. KINROSS | Kinross (1,928), Milnathort. |
| 20. FIFE | Cupar, Dunfermline (14,983), St. Andrews. |

Obs. The N. and W. portion of the 10 central counties is mountainous, and yields pastoral and some agricultural produce, e.g., oats and potatoes. The E. portion includes Strathmore, the Carse of Gowrie, the Carse of Stirling, &c., which are amongst the richest and most highly cultivated districts in the British Islands. Beans, barley, potatoes, and wheat are produced in abundance. This is also the chief district of the Scotch linen manufacture. The S. portion of these counties is hilly, and but partially cultivated. It is, however, rich in coal, iron, and limestone, and is the chief seat of the Scotch tartan manufacture. The coast-dwellers on both the E. and W. sides obtain much wealth from the extensive herring fisheries.

¹ The chief manufacturing county on the N. side of the Forth. The coarse linen trade is principally carried on here.

² Argyll includes the islands Mull, Islay, Jura, Iona, Tiree, Coll, &c.

³ Consists of the islands Bute and Arran. Bute

is said to have the most salubrious climate in Scotland.

⁴ Has a detached portion between the counties Stirling and Lanark.

⁵ Clackmannan is the smallest county in Scotland.

NOTES ON THE TOWNS.

Stonehaven is a sea-port, fishing town, and watering-place, which has cotton and linen manufactures.

Forfar is chiefly celebrated for its linen manufacture, which brings it into close connection with Dundee. **Dundee**, on the Firth of Tay, is the third largest town in Scotland. It is an important sea-port, and the metropolis of the jute and coarse linen trade, and has large works for ship-building and machine-making. **Montrose**, another sea-port; chief industry, flax-spinning, bleaching, and ship-building, is the birthplace of *Joseph Hume*.

Perth, the capital of Scotland till A. D. 1440, is one of the most beautifully situated towns in the British Isles. It is busily engaged in cotton, linen, and iron manufactures, and in ship-building. A little to the N. of Perth lies **Scone**, where the Kings of Scotland were formerly crowned.

Inverary is a sea-port town, much engaged in the herring fishery. **Campbeltown**, a sea-port on the Peninsula of Cantire, is celebrated for its whisky. It was the earliest capital of the Scots under the name *Dalruadhain*.

Rothsay, a celebrated sea-bathing and watering place in the Isle of Bute, has cotton manufactures and ship-building.

Dumbarton, at the junction of the Leven with the Clyde. On a double-peaked rock of basalt stands its historical castle, a picturesque, but no longer strong, fortress of great antiquity; it is one of the four Scottish fortresses maintained at the public expense by the terms of the Union. It has iron and wooden-ship building, iron founding, engineering, and rope manufactures.

Stirling, an ancient town, celebrated for its castle, was a favourite residence of James V. It is much engaged in the manufactures of cotton and woollen goods, soap, and mineral oils. Near the town was fought the battle of **Stirling Bridge** in 1297, and that of **Bannockburn** in 1314. **Falkirk** is celebrated for its large cattle markets, called "Trysts." Wallace was defeated here in 1298 by Edward I., and the Royal Forces by the Pretender in 1746. The famous Carron ironworks are in the vicinity.

Dunfermline was formerly a frequent residence of the Scottish Kings. It contains the ruins of a fine abbey, in which Robert Bruce was buried: also of a palace, in which Charles I. was born, and in which Charles II. subscribed the "*Solemn League and Covenant*" in 1650. It is now chiefly noted for its fine linen manufactures, its iron foundries, its breweries, and its soap works. **St. Andrews**, seat of the oldest university in Scotland, was for a long time the ecclesiastical metropolis. It was the scene of *John Knox's* preaching, of *Wishart's* martyrdom, and of *Beaton's* assassination.

III. 13 SOUTHERN COUNTIES.

21. RENFREW ¹	Renfrew , <i>Greenock</i> (57,821), Paisley.
22. Ayr	Ayr , <i>Kilmarnock</i> (22,963).
23. LANARK ²	Lanark , <i>Glasgow</i> ³ (547,538), Coatbridge.
24. LINLITHGOW, OR W. LOTHIAN*	Linlithgow , <i>Bathgate</i> (4,991).
25. EDINBURGH, OR MIDLOTHIAN*	Edinburgh (197,581), Leith, Musselburgh.
26. HADDINGTON, OR E. LOTHIAN*	Haddington (4,007), Dunbar, Preston Pans.
27. BERWICK, OR MERSE*	Greenlaw , <i>Dunse</i> (2,618), Eyemouth.
28. ROXBURGH.	Jedburgh , <i>Hawick</i> (8,733), Kelso, Melrose.
29. SELKIRK, OR ETTRICK FOREST*	Selkirk , <i>Galashiels</i> ⁴ (10,312).
30. PEEBLES, OR TWEEDDALE*	Peebles (2,631), Innerleithen.
31. DUMFRIES	Dumfries ⁵ (15,437), Annan.
32. KIRKCUDBRIGHT, OR E. GALLOWAY*	Kirkcudbright , <i>Dalbeattie</i> (2,937).
33. WIGTOWN, OR W. GALLOWAY*	Wigtown , <i>Stranraer</i> (5,977).

¹ Renfrew includes the chief sea-ports in W. Scotland.

² Lanark is the principal manufacturing county in Scotland, and a great fruit-growing district.

³ Part of Glasgow is in Renfrew.

⁴ Part of Galashiels is in Roxburgh.

⁵ Part of Dumfries is in Kirkcudbright.

Obs. Of the 13 southern counties, **Renfrew, Ayr, and Lanark** are *manufacturing and commercial*. **Linlithgow, Edinburgh, Haddington, and Berwick** are, for the most part, *agricultural*; while the remaining 6 are chiefly *pastoral*. The principal *agricultural products* are wheat, cattle, turnips, and potatoes. The chief *minerals*, coal and iron. The chief *manufactures*, iron, hardware, cotton, woollen, and silk goods. Most of the important towns in Scotland are situated in these 13 S. counties, and very many of the most celebrated antiquities.

NOTES ON THE TOWNS.

Greenock is a large sea-port on the estuary of the Clyde. Its docks are amongst the best in the empire. Its principal trades are sugar-refining and ship-building. It is the birthplace of *James Watt*.

Paisley is famous for its shawl, silk, and cotton-thread manufactures. *Professor Wilson*, and *Alexander Wilson*, the ornithologist, were born here.

Ayr is a beautifully situated sea-port with a commodious natural harbour. Its chief exports are coal, iron, and Glasgow manufactures. Near the town is the cottage where *Burns* was born; also, the great monument erected to his memory in 1820. **Kilmarnock**, on the Irvine, has important manufactories of carpets, boots, and woollen yarn.

Glasgow, the largest town in Scotland, is situated on the River Clyde. It is 43 m. W. of Edinburgh and 400 m. N. W. of London. It is the seat of a renowned university, and of other famous literary and scientific institutions. The Scotch manufactures and commerce, especially the cotton trade, machinery, and ship-building, have here their chief emporiums. Glasgow is also the centre of a great iron and coal district. *Sir John Moore, Lord Clyde, and Campbell*, the poet, were born here.

Linlithgow contains the ruins of the Royal Palace in which *Mary Queen of Scots* was born, 1542. The *Regent Murray* was assassinated here in 1570.

Bathgate is the chief seat of the manufacture of the paraffin and mineral oils, which are obtained from the Torbanehill coal.

Edinburgh, the metropolis of Scotland, lies about 400 m. N. W. from London. Built on the ridges of several hills, it is, perhaps, the most picturesquely situated city in Europe. It consists of the Old Town—seated on the central and loftiest ridge, and notable for the extraordinary height of its old houses—and the New Town, which is laid out in regular streets and squares. It has a university, which is distinguished for its Medical and Metaphysical Schools; it is also the seat of the supreme law courts, of a theological college, and of numerous literary and scientific institutions. The chief buildings are the castle, the residence of the early Scottish kings, which crowns the summit of the central hill; Holyrood Palace; and St. Giles' cathedral. The commerce of Edinburgh, which is not very important, is carried on through the port of Leith.

Leith, $1\frac{1}{2}$ m. N. of Edinburgh, is on the Firth of Forth, and on the C. & N. B. railways. It is the port of Edinburgh, and the great emporium of grain for Scotland. Its trades are chiefly connected with iron-ship building, and the manufacture of marine machinery.

Dumfries, regarded as the provincial capital of Scotland, has manufactures of tweeds, hosiery, leather, and shoes. *John Comyn* was assassinated here in 1306 by Robert Bruce. It is the burial place of *Burns*.

INDUSTRIES.—Of the producing population of Scotland there are engaged in

1. <i>Manufactures</i>	about 36	p. c.	} = 100.
2. <i>Agriculture</i>	" 22	p. c.	
3. <i>Mining Operations</i>	" 17	p. c.	
4. <i>Commerce</i>	" 10½	p. c.	
5. <i>Professional, Domestic, and Indefinite</i> } <i>Callings</i>	" 14½	p. c.	

Obs. 1. The chief manufactures are—

a. *Textile Fabrics.*—Cotton, woollen,¹ linen and silk goods,—wrought principally, in the counties of Lanark, Forfar, Renfrew, Fife, Ayr, Aberdeen, and Stirling.

b. *Ship-building* is carried on chiefly at Govan, Glasgow, Greenock, Dumbarton, Dundee, and Aberdeen.

c. *Iron*, in the Coalfield of Lanark and around Glasgow—at Airdrie, Coatbridge, Bathgate, &c. *Machinery*, chiefly at Glasgow, Edinburgh, Greenock, Leith, Dundee, and Govan.

d. *Furniture*, made principally at Glasgow, Edinburgh, Dundee, and Aberdeen.

e. *Food and Drinks*, made at Glasgow, Edinburgh, Dundee, and Leith.

Obs. 2. The Chief Commercial Centres are the *ports* of Glasgow, Greenock, Leith, Dundee, and Aberdeen; and the *towns*, Glasgow, Edinburgh, Paisley, Perth, and Forfar. The chief *exports* are manufactured goods and agricultural produce; the chief *imports*, cotton, flax, hemp, wool, silk, timber, and colonial produce.

COMMUNICATIONS.—Scotland is traversed by nearly 4,000 m. of excellent *Turnpike Roads*, 2,780 m. of *Railway*, and 212 m. of *Canals*. *Telegraphic communication* exists between all the principal towns and also with the chief towns in England; and submarine cables connect Scotland with Ireland.

RELIGION AND EDUCATION.—As in England and Wales, so in Scotland, there is perfect freedom of religious opinions. The established religion is *Presbyterianism*; but there are many other religious denominations, as, the *Free Church*, and the *United Presbyterian Church*. The Irish immigration has caused a great increase of *Roman Catholics* during the last 50 years. There is also an *Episcopal Church*, under seven Bishops, which embraces a large proportion of the nobility and gentry. *Education* is widely diffused throughout the greater part of Scotland. An excellent system of parish schools affords *elementary education* for all classes of children. *Higher education* is provided by the private academies, for which Scotland is famous, and in the universities of Edinburgh, Glasgow, Aberdeen, and St. Andrews.

3. IRELAND.

PHYSICAL GEOGRAPHY.

Latitude. Between 51° 27' and 55° 23' N. **Longitude.** Between 5° 26' and 10° 29' W.
Area. 32,524 sq. m.

Obs. The greatest *length* of Ireland from N.E. to S.W. is 306 m.: the greatest *breadth*, 195 m.: the *extreme points* on the mainland are Malin Head, on the N.; Halbert Point, on the E.; Mizen Head, on the S.; and Dunmore Head, on the W.

POSITION AND BOUNDARIES.—Ireland lies in the Atlantic Ocean, about 14 m. W. of Great Britain. It is *bounded* on the

N., S., and W. by the open Atlantic. E. by the North Channel, Irish Sea, and St. George's Channel.

¹ Especially tweeds, tartans, and plaids.

COASTS.—The coasts on the N.W. and S.W. are so deeply indented with inlets of the sea, that no spot in Ireland is more than 60 m. distant from salt water. The length of *coastline* is estimated at 2,200 m. or 1 m. of coast to every 15. sq. m. of area. The principal coast features are the

1. **Capes.**—Garron Point, St. John's Point, Dunany Point, Clogher Head, Howth Head, Wicklow Head, and Carnsore Point, on the E.

Hook Head, Old Head of Kinsale, Gally Head, Cape Clear, and Mizen Head, on the S.

Dursey Head, Dunmore Head, Kerry Head, Loop Head, Hag's Head, Black Head, Slyne Head, Achill Head, Erris Head, Telin Head, and Bloody Foreland, on the W.

Horn Head, Malin Head, Bengore¹ Head, and Fair Head, on the N.

Obs. The Irish Capes, as a rule, are lofty, rocky, and precipitous. Horn Head is nearly 1000 ft., and Achill Head, upwards of 2000 ft., above the level of the sea. Cape Clear is on Clear Island.

2. **Inlets.**—Belfast Lough, Strangford Lough, Dundrum Bay, Carlingford Lough, Dundalk Bay, Drogheda Bay, Dublin Bay, and Wexford Harbour, on the E.

Waterford Harbour, Dungarvan Bay, Youghal Harbour, Cork Harbour, and Long Island Bay, on the S.

Bantry Bay, Estuary of the Kenmare, Dingle Bay, Tralee Bay, Estuary of the Shannon, Galway Bay, Clew Bay, Blacksod Bay, Broadhaven Bay, Killala Bay, Sligo Bay, and Donegal Bay, on the W.

Sheep Haven, Lough Swilly, and Lough Foyle, on the N.

Obs. Many of these inlets form natural harbours of unrivalled excellence. No less than fourteen of them are capable of floating the largest men-of-war; two of them, Cork Harbour and Bantry Bay, would shelter the entire navy of the empire; and there are more than 50 which are well adapted to the ordinary requirements of commerce.

ISLANDS.—A great number of small islands and islets lie adjacent to the coasts of Ireland, but they are of little importance. The chief of them are

Achill, which is the largest island near the Irish Coasts. It lies off the W. Coast on the S. side of Blacksod Bay, and has an *area* of 70 sq. m.

Valentia, on the S. side of the entrance to Dingle Bay, which is the most fertile of the Irish islands. It contains valuable slate quarries, and is an important telegraph station for meteorological reports.

Spike Island, in Cork Harbour, which contains the Westmoreland Fort and a large prison for convicts, who are employed on the fortifications. This island, and some smaller ones in its vicinity, are important military strongholds.

Obs. Other Islands are, *Ireland's Eye*, and *Lambay*, off the E. Coast; *Clear Island*, off the S. Coast; *Bear Island*, *Blasket Isles*, *Aran Isles*, and *Arran*, off the W. Coast.

SURFACE.—A large portion of the surface of Ireland consists of a great plain interspersed with low hills. It is hemmed in, especially on the W. and S. W. sides, by a belt or rim of mountainous country, which is broken through by many valleys winding towards the ocean. This strip of mountainous country, however, contains no dorsal ranges of sufficient importance to have subordinated to their names the adjacent chains and detached groups; and hence it happens

¹ **Bengore Head**,—near this point, on its W. side, lies the "Giants' Causeway," which consists of some 40,000 closely-joined columns of basalt, and is a platform of some 700 yards long and 350 yards broad, which slopes down towards the sea from the foot of a high cliff.

that these groups are described under the names of the counties in which they lie. The chief surface features to be noted are the

1. **Mountains**, the chief of which are named in the following table:—

MOUNTAIN GROUPS.	POSITION OF.	CHIEF SUMMITS.	
		NAME.	HEIGHT IN FEET.
1. Mourne Mts.	N. of Carlingford Lough	<i>Slieve Donard</i>	2,796
2. Wicklow Mts.	S. of Dublin Bay	<i>Lugnaquilla</i>	3,039
3. Knockmealdown Mts.	Between the Blackwater and the Suir	{ <i>Knockmealdown Hill</i>	2,609
4. Galty Mts.	N. of, and parallel to the Knockmealdowns	<i>Galtymore</i>	3,015
5. Kerry Mts.	Along the S.W. coast	{ <i>Carrantuohill</i> (in Mac Gillicuddy Reeks).	3,414
6. Galway Mts.	N. and E. of Galway Bay	<i>Benbaun</i>	2,395
7. Donegal Mts.	Along the N.W. coast	<i>Errigal</i>	2,466
8. Slieve Bloom Mts.	Between the sources of the Barrow and Suir	<i>Slieve Bloom Hill</i>	1,733
9. Silver Mine Mts.	Between the Shannon and Suir	<i>Kepper Hill</i>	2,278

Obs. 1. The Wicklow Mountains lie near the E. coast, and consist of an extensive mass of high ground, surmounted by numerous lofty eminences, and seamed by narrow, but precipitous, ravines. This mountain region is famous for the exquisite beauty of its scenery.

Obs. 2. The Kerry Mountains occupy the S.W. corner, and contain the loftiest summits in Ireland, as *Caher* and *Brandon*, which are above 3,000 ft. above the sea. The region embraces several distinct mountain ranges, which run out to the W. coast, the most notable being the *Mac Gillicuddy Reeks*. Some of the grandest scenery, as well as some of the most charming and romantic spots in Europe, are embosomed in these mountains.

Obs. 3. The Galway Mountains lie along the W. coast, and stretch from Galway Bay on the S. to Broadhaven Bay on the N. Clew Bay divides them into a northern region, the principal portion of which is *Nephin Beg Range*, which culminates in *Nephin Mountain* (2,646 ft.), and a southern region termed the *Connemara Mountains*, with the gigantic *Mulreea* (2,688 ft.) for its highest summit. The cliff scenery of this region is scarcely to be surpassed for grandeur.

2. **Plains.**—Encircled by the above named maritime belt lies the *Great Plain of Ireland*, a vast tract of even ground having a mean elevation of some 250 ft. above the sea, and stretching from Lough Neagh, in the N., to the Knockmealdown Mountains in the S.; and from the Irish Sea, on the E. to Galway Bay, on the W. It is generally divided into the following plains, viz.:—

a. The Northern Plain, which embraces the basin of Lough Neagh and the valley of the river Bann, in the N.E.

b. The Central Plain, which coincides mainly with the upper and middle valleys of the Shannon. The low districts of this plain, near the rivers and lakes, include large areas of bog land; but the more elevated portions are fertile, and yield great quantities of grain, or excellent pasturage.

c. The Eastern Plain, which embraces the valleys of the Boyne and the Liffey, and the upper valley of the Barrow. Its surface, generally, is undulating and marked by rich pastures; but in the S.W. it is a continuous bog.

d. The Western Plain, which consists chiefly of the E. basin of Loughs Corrib and Mask, and is flat and interspersed with bogs.

e. The Plain of Limerick, which coincides with the lower valley of the Shannon, and contains some of the most productive tracts in Ireland.

Obs. These plains include upwards of 12,000 sq. m. of bog, an area equal to nearly two-fifths of the entire surface of the country.

DRAINAGE.—The drainage of Ireland, which is very copious, is carried to the sea by four slopes which incline, respectively, towards the E., the S., the W., and the N. The chief drainage agents are

1. **The Rivers**, the most important of which are those flowing down the

- a. *Eastern Slope*, viz., the Lagan, Boyne, and Liffey.
- b. *Southern Slope*, viz., the Slaney, Barrow, Blackwater, Lee, and Bandon.
- c. *Western Slope*, the Laune, Shannon, Dalgen, Moy, and Erne.
- d. *Northern Slope*, the Foyle, and Bann.

Obs. 1. The Shannon, the principal river in Ireland, and next to the Thames, the principal river of the British Islands, rises in County Cavan, flows S. and W., over a course of 254 m., into the Atlantic. It traverses, or rather expands into, the three great Loughs, Allen, Ree, and Derg, and forms, in the last 60 miles of its course, a commodious estuary, which, at its embouchure, between Loop Head and Kerry Head, is 7 m. wide. It is navigable nearly up to its source. Its chief tributaries are, on the right bank, the Boyle, and Suck; on the left bank, the Newry, Brosna, Little Brosna, and Maigue.

Obs. 2. The Liffey rises in the Wicklow Mountains and, after a tortuous course of 50 m., flows into Dublin Bay at a point about 12 m. to the N. of its source. This river derives its interest from the beautiful country which it waters, and its importance from having on its banks the metropolis of Ireland.

Obs. 3. The Barrow rises in the Slieve Bloom Mountains, and flows S. over a course of 106 m. into Waterford Harbour. It is navigable to Athy, 70 m. from its mouth. It receives on its right bank two important tributaries, the Nore and Suir, which also rise in the mountain region of Slieve Bloom.

*Obs. 4. The Boyne*¹ rises in the bog of Allen, and flows, after a N.E. course of 63 m., into the Irish Sea. It is navigable for barges to Navan, 19 m. from the sea, and for large vessels to Drogheda. Its chief tributary is the Blackwater, which it receives on its left bank.

Lakes.—The Irish Lakes, both from their number and size, constitute a prominent feature in the physical geography of the country. They lie mostly at low elevations, and are generally formed by the expansions of large rivers in even and boggy tracts; their shores are low and often marshy; and yet some of them exhibit scenery of indescribable interest and beauty. The chief of them are

a. *Lough Neagh*, in the N.E., which is the largest lake in the British Islands, occupying an area of 154 sq. m. It is fed by ten rivers, and emits but one, the Bann. It is navigated by steamers.

b. *Lough Erne* consists of two parts which are connected by the river Erne. It is one of the most attractive of the Irish lakes, its combinations of wood and water being, probably, of unequalled beauty. Its surplus waters are carried into Donegal Bay by the river Erne.

c. *Lough Corrib*, in W. Ireland, extends from the head of Galway Bay inland towards the N.W. Though this lake contains large numbers of islands, and numerous shoals, it is navigated by steamers. A canal connects it with the sea at Galway.

d. *The Lakes of Killarney*, three in number, lie embosomed amongst the mountains of Kerry, whose steep sides are clothed with the most luxuriant verdure and, at frequent intervals, with expanses of dark forest. *The Lower Lake*, or *Lough Leane*, is the largest. Next in size comes *The Middle Lake*, which is also called *Muckross* or *Torc Lake*. *The Upper Lake* is the smallest, being about 2½ m. long, and ¼ m. broad, but it is the most beautiful. They are connected with one another, and the Laune carries their surplus waters into Dingle Bay.

Obs. Other Irish lakes are *Allen*, *Conn*, *Mask*, *Ree*, and *Derg*.

¹ The Boyne gives its name to the celebrated battle in which William III. defeated James II. 1st July, 1690. The battle was fought near Drogheda.

CLIMATE.—Ireland, owing to its numerous and deep inlets of the sea, and to its insular position, enjoys a mild and genial climate. The *prevailing winds* are from the W. and bear with them a more than average quantity of moisture. This, however, is so favourable to Irish vegetation that from very early times the country has borne the name “Green,” or “Emerald Isle.” Plants flourish here in the open air, which cannot be cultivated in England without artificial heat. The *mean annual rainfall* is about 36 inches.

PRODUCTIONS. *Animals.*—Ireland has neither toads, nor moles, nor snakes. Her peculiar breeds of cattle, and the Irish greyhound are rapidly becoming extinct. In other respects her animal productions are the same as those in Great Britain. *Vegetable Productions* are, for the most part, identical with those of England. Ireland has, however, some additional species, such as the broad leaved myrtle, the arbutus, and some alpine plants, which are unknown in the sister isle. *Mineral Productions* are of the same species as those in the adjacent islands, but neither so abundant nor of so valuable a quality. Ireland possesses also, black and grey marble, and valuable deposits of peat.

PEOPLE AND LANGUAGE.—The *population* of Ireland is 5,412,377. It is of *Celtic* origin, but has been largely mixed, especially in the N. and E., by immigrants from England and Scotland. Although *English* is generally spoken throughout the country, the people in the centre and W. of the island still continue to speak *Erse*, a dialect of the Celtic language.

POLITICAL GEOGRAPHY.

POLITICAL DIVISIONS.—Ireland is divided into four *Provinces*, viz., Ulster, Connaught, Leinster, and Munster. The division into *counties* was begun by King John, carried on by Elizabeth, and finished by James I. Ulster includes 9 counties; Connaught, 5; Leinster, 12; and Munster, 6.

I. ULSTER—NINE COUNTIES.

- | | |
|-----------------|---|
| 1. DONEGAL | Lifford, Ballyshannon ¹ (2,958). |
| 2. LONDONDERRY | Londonderry (25,342), Coleraine. |
| 3. ANTRIM | Belfast (174,412), Carrickfergus, ² Lisburn. |
| 4. TYRONE | Omagh, Strabane (4,309), Dungannon. |
| 5. DOWN | Downpatrick, Newry (13,364), Newtownards. |
| 6. ARMAGH | Armagh (10,192), Lurgan, Portadown. |
| 7. MONAGHAN .. | Monaghan (3,632), Clones. |
| 8. CAVAN | Cavan (3,389), Belturbet. |
| 9. FERMANAGH .. | Enniskillen ³ (5,836), Newtown Butler. |

Obs. The Province of Ulster occupying all the N. of Ireland has an area of 8,568 sq. m. and a *population* of 953,423, and is the most important division of the country. Its *shores* are bold and rocky, especially on the N. and E., but are everywhere deeply penetrated by arms of the sea. The *surface* is mountainous in the W. and E., and more than three-fifths of the *soil* is under cultivation. The Province is *agricultural and manufacturing*. It is the chief seat of the Irish linen manufacture, and is traversed by the Ulster Railway and the Ulster Canal.

¹ Bally = a town or village.

Carrick = a castle or tower.

³ Ennis or Inis = an island.

The people are mostly Protestants, and are better educated and in more comfortable circumstances than the populations of the other provinces.

NOTES ON THE TOWNS.

Belfast, the capital of Ulster, and the second town in Ireland, is an important sea-port, and the chief manufacturing seat in the island. It is 86 m. N.E. of Dublin. The Irish linen and cotton manufactures have their focus here, and afford constant employment to the towns, Antrim, Lisburn, Newtownards, Downpatrick, Newry, Armagh, Portadown, Lurgan, and Coleraine. Besides being the "Manchester" of Ireland, Belfast is the seat of one of the "Queen's Colleges," and possesses many other educational institutions.

Londonderry is the chief port in the N. of Ireland, and has manufactories of table linen. It is famous for its heroic defence, under the Rev. G. Walker, against the forces of James II. in 1689, when it stood a siege of 105 days' duration.

Downpatrick, with holy wells, which attract many Roman Catholic pilgrims, **Newry**, a flourishing sea-port with important linen and cotton works, and **Armagh**, the ecclesiastical capital of Ireland, with two cathedrals, are other noteworthy towns of Ulster.

II. CONNAUGHT—FIVE COUNTIES.

10. LEITRIM .. Carrick (1,431), Leitrim.
11. SLIGO Sligo (10,670), Castle Connor.
12. MAYO Castlebar, Westport (4,417), Ballina.
13. ROSCOMMON Roscommon, Boyle (3,347), Castlereagh.
14. GALWAY .. Galway (16,697), Tuam, Loughrea.

Obs. Connaught, embracing the most Westerly Counties of Ireland, has an area of 6,862 sq. m. and a population of 845,993. Its coasts are remarkably bold and rugged; but they include numerous bays and sounds which embrace several commodious harbours. The surface is hilly in the N. and S. and mountainous in the W. In the centre it is flat, and there are numerous peat bogs. The soil is moderately fertile and about half the province is arable. The prevalent industries are agriculture, pasturing, linen manufacture, mining, and fishing. Nearly the whole of the people are Roman Catholics, and many of them are steeped in poverty and ignorance.

NOTES ON THE TOWNS.

Sligo, at the head of Sligo Bay, is a port of growing importance, the entrepôt of a large district. It exports flour, provisions, linen, and flax; and imports English manufactures and colonial produce.

Galway is a sea-port town, 105 m. W. of Dublin, and the seat of one of the "Queen's Colleges." It exports great quantities of provisions, and has some manufactures. It is also a fishing station.

Tuam is an Episcopal city, and the See of a Protestant Bishop, on the river Clare, with Roman Catholic and Protestant cathedrals, two episcopal palaces, the Roman Catholic College of St. Jartath, and many other educational institutions. It also possesses linen and canvas manufactories.

Westport on Clew Bay, and **Ballina** on the river Moy, are thriving ports.

III. LEINSTER—TWELVE COUNTIES.

15. LOUTH Dundalk, Drogheda (16,165), Ardee.
16. MEATH Trim, Navan (4,496), Kells.
17. LONGFORD Longford (4,376), Edgeworthstown.
18. WESTMEATH Mullingar, Athlone (9,945).
19. KING'S COUNTY . Tullamore (5,179), Parson's Town.
20. KILDARE Athy (4,510), Maynooth, Kildare.
21. DUBLIN Dublin (946,326), Kingstown, Blackrock.
22. WICKLOW Wicklow, Arklow (5,178), Bray.
23. QUEEN'S COUNTY Maryborough, Mountmellick (3,316).
24. CARLOW Carlow (7,842), Tullow.
25. WEXFORD Wexford (12,077), New Ross, Enniscorthy.
26. KILKENNY Kilkenny (12,710), Callan.

Obs. Leinster occupies all S.E. Ireland. Its area is 7,620 sq. m., and its population 1,339,451. The coasts are steep and precipitous in places, and generally unbroken and devoid of good harbours. The surface is mostly even, but there are mountains in the E. and W. The soil embraces numerous bogs and morasses, but it is generally fertile and well cultivated. The province is *agricultural* and *pastoral*, yielding much corn and many cattle. Nearly all the people are Roman Catholics, and more than a fourth part of them are totally illiterate. Anciently the province formed the petty kingdoms of Leinster and Meath.

NOTES ON THE TOWNS.

Dublin, the metropolis of Ireland, is a port, the residence of the Lord-Lieutenant of the country, the See of an archbishop, and a university city. Its two fine cathedrals, its numerous churches, its castle, its college buildings, its bank, post-office, and custom-house, its monuments, parks—especially the Phoenix Park,—and squares, contribute to make it one of the handsomest cities in the British Empire. Literary, scientific, educational, and benevolent institutions abound in Dublin and are, for the most part, well endowed. The chief manufactures of the city are poplins, and porter.

Drogheda, a port on the Boyne, has a large brewing trade, and cotton manufactories. The Battle of the Boyne (1690), was fought 2 m. W. of Drogheda.

Kingstown is a sea-port and favourite watering-place on the Bay of Dublin, and 7 m. S.E. of that city. It is the station of the Royal Mail Packets which ply between Ireland, Liverpool, and Holyhead.

Wexford is a sea-port, which is extensively engaged in the export of Irish agricultural produce. It has ship-building yards.

Dundalk, Wicklow, and Arklow, are other sea-ports of this province.

IV. MUNSTER—CONTAINING SIX COUNTIES.

- 27. CLARE Ennis (8,503), Kilrush.
- 28. TIPPERARY. Clonmel (11,113), Carrick-on-Suir, Nenagh.
- 29. WATERFORD Waterford (23,349), Dungarvan, Portlaw.
- 30. LIMERICK .. Limerick (39,353), Rathkeale.
- 31. CORK Cork¹ (78,642), Queenstown, Youghal, Kinsale.
- 32. KERRY Tralee (9,506), Killarney, Dingle.

Obs. Munster, the largest of the Irish provinces, occupies the whole of S.W. Ireland, has an area of 9,481 sq. m., and a population of 1,393,485. The coasts are wild, grand, deeply penetrated by arms of the sea, and embrace some excellent harbours. The surface is mountainous in the W., but includes large plains in the N., E., and S. Much of it is bog and stony waste, but there is also much of the best land in Ireland. The province is *agricultural* and *pastoral*, but there are valuable mines of copper and limestone in the county of Cork. The population is nearly all Roman Catholic, and two-fifths of them are illiterate.

NOTES ON THE TOWNS.

Cork, the third city in Ireland, and an important port, is the emporium of the provision trade in the S. of Ireland. Its unrivalled harbour lies 11 m. below the city, and is a naval station of some consequence. It is the seat of a "Queen's College," and has breweries, distilleries, and manufactures in iron, glass, and leather.

Limerick, a city and port, lies 50 m. from the Atlantic, and 108 m. S.W. of Dublin. It is the great emporium of the provision trade in the W. of Ireland, and exports very large quantities of corn, meal, butter, and meat. Its chief manufactures are lace, linen, and fish-hooks. The town is built on an island in the Shannon, and on both banks of that river.

Waterford is a sea-port, and a great provision depôt of S.E. Ireland. Its principal exports are dairy and agricultural produce, cattle, and cotton goods.

Kilrush, Dungarvan, Youghal, Kinsale, Tralee, and Dingle, are other ports of Munster.

¹ Cork (Corcach — "a marsh"). The city sprang up around a monastery founded in the 6th century on the edge of a marsh; and a part of the city is still called "the Marsh."

INDUSTRIES.—The principal industries are *Grazing and Cattle Rearing*, which are pursued chiefly in the S., W., and central districts: *Agriculture*, principally in the E.: *Manufactures*, especially of linens, cottons, woollens, and poplins, in the province of Ulster: *Brewing*, and *Distilling* at Dublin, Cork, Galway, Waterford, &c., and *Fishing*.

Obs. The chief exports are agricultural and pastoral produce, linens, poplins, porter, and spirits: imports, colonial produce and raw material for manufactures.

COMMUNICATIONS.—These are very good, embracing excellent *Turnpike Roads*, upwards of 2000 m. of *Railway*, a large *Waterway* by river and canal, and a good *Telegraphic Service*.

Obs. Ireland is connected with England by 5 submarine cables, and with America by the Atlantic cable.

RELIGION AND EDUCATION.—Four-fifths of the people are *Roman Catholics*. *Protestant Episcopalians*, and *Presbyterians* are the next most important denominations. *National education* is largely subsidised by Government. *Higher education* is cared for by the various academies, colleges, and universities of the country.

BRITISH COLONIES AND POSSESSIONS.

Great Britain has colonies and foreign possessions in every known part of the world. Their *population* is 7 times, and their *area* nearly 63 times that of the mother country. They are in

1. **Europe**—Heligoland, Gibraltar, Malta, and the Channel Islands.
2. **America**—The Dominion of Canada, Newfoundland, and the Bermuda Isles; British West Indies, British Guiana, and the Falkland Isles.
3. **Africa**—The West African Settlement, Cape Colony, British Kaffraria, Natal, Transvaal, Basuto Land, Griqua Land West, Transkei Districts, and the islands St. Helena, Ascension, and Mauritius.
4. **Asia**—British India, Cyprus, Ceylon, Perim, Aden, Straits Settlements, Labuan, Hong Kong, the Nicobars, and Andaman Isles.
5. **Australasia**—Australia, Tasmania, New Zealand, the Fiji Islands, the Chatham Isles, and several small islands.

Obs. 1. These possessions are described under the countries in which they respectively lie.

Obs. 2. The entire area and population of the British empire is as follows:—

DIVISIONS.	COUNTRIES, ETC.	AREA IN SQUARE MILES.	POPULATION IN 1878.
I. THE UNITED KINGDOM.	England and Wales	58,311	24,854,397
	Scotland	30,463	3,593,929
	Ireland	32,531	5,350,950
	Adjacent Islands	303	145,000
	Soldiers and Sailors out of the country		216,000
II. COLONIES, DEPENDENCIES, AND POSSESSIONS IN	Europe	126	174,362
	Asia	943,014	194,361,223
	Africa	588,882	2,926,090
	America	3,525,283	5,197,919
	Australasia	3,084,671	2,651,500
	Total	8,263,584	239,471,370

NORWAY.

PHYSICAL GEOGRAPHY.

Latitude. Between 58° and 71° 10' N. *Longitude.* Between 5° and 31° E.
Area. 122,243 sq. m.

POSITION AND BOUNDARIES.—Norway forms the W. part of the Scandinavian Peninsula, and lies in the extreme N. W. of Europe. It is bounded on the

N. by the Arctic Ocean. E. by Russia and Sweden. S. by the Skager Rack. W. by the Atlantic Ocean.

COASTS.—The N. coast, and the W. coast from N. to S., are rocky and precipitous. They are also deeply indented by the sea, which penetrates in some instances more than 100 m. into the interior. The chief

1. **Capes** are Nordkyn and North, on the N.; and the Naze, on the S.
2. **Inlets** are the Varanger, and Porsanger Fjords, on the N.; the West, Sogne, and Hardanger Fjords, on the W.; and the Christiania Fjord, on the S.

Obs. The Fjords form one of the most distinctive features of the Physical Geography of Norway. They generally run between perpendicular rocks of great height, penetrate, often, far into the land, and in many cases send out branches in all directions.

3. **Straits** are the West Fjord, between the mainland and the Lofoden Archipelago, on the N. W.; and the Skager Rack, between the S. coast and Denmark, on the S.

ISLANDS.—These are very numerous, fringing the W. coast from N. to S. and protecting it against the violence of the Atlantic waves and storms. Those of most general interest are *Magerö*, on the N.; and the *Lofoden Archipelago*, on the N. W.

Obs. The *Mälstrom*, the famous but mythical whirlpool, lies between Moskenö and Værö, the two southernmost islands of the Lofoden group.

SURFACE.—The surface of Norway is mountainous, and rugged, and so elevated that nearly a third part of the whole country is covered by perpetual snow. The most salient surface features are the

1. **Mountains**, which run throughout the country from N. to S., not in a regular and continuous chain, but in a succession of mountain blocks which are connected together by lower elevations. The tops of these blocks form tablelands, which are called "Fjelds" (*plains or fields*). The chief divisions of these mountains, going from N. to S., are the
 - a. *Kiølen Mountains*, which extend N. and S. as far as the 63rd parallel. They form the watershed between the Gulf of Bothnia and the Arctic and Atlantic Oceans. Their highest point is *Sulitelma* (6,152 ft.).
 - b. *Dovre Fjeld*, running S. and W. of the Kiølen Mts. Its chief summit is *Sneehatten* (7,566 ft.).
 - c. *Jotun Fjeld* which lies S. of the Dovre Fjeld and embraces *Galdhøpiggen* (8,546 ft.), the culminating summit of Norway.
 - d. *Hardanger Fjeld*, running S. W. from the Jotun Fjeld. Its loftiest point is *Jöklen* (6,533 ft.).

2. Valleys.—The best and most fertile land in Norway is found in the valleys, as are also the most primitive peoples and the most romantic scenery. The most important of them are

- a. *Gudbrandsdal*, the largest in Norway, which is watered by the Glommen.
- b. *Hallingdal*. c. *Hitterdal*. d. *Romsdal*.

DRAINAGE.—The abundant waters of Norway flow N. into the Arctic Ocean; and W. and S. into the Atlantic. The chief draining agents are the

1. **Rivers**, the largest of which are the

- a. *Tana*, which flows N. into the Arctic Ocean, through the Tana Fjord.
- b. *Glommen*, the largest river of Norway, which issues from Lake Åursund near the E. frontier, and flows over a general S. course of some 300 m. long into the Skager Rack.
- c. *Drammen*, which also flows S. into the Skager Rack, through the Christiania Fjord.

Obs. 1. The Norwegian rivers are, for the most part, impetuous torrents; and though they are but little adapted for navigation, they furnish a valuable motive power for mining and mill-machinery.

Obs. 2. *The Waterfalls* of the Norwegian rivers are numerous, and by far the loftiest and most picturesque in Europe. Among the chief of them are—1. *The Mørk Foss*, in Aardal, on the Jotun Fjeld, with a fall of 1,040 ft. 2. *The Vöring Foss*, with a fall of upwards of 600 ft.

2. **Lakes**, which are very numerous, and of which the largest are

- a. *Mjøsen*, on the Vormen (a tributary of the Glommen), with an area of 138 sq. m.
- b. *Fæmum*, which has an area of nearly 50 sq. m.

3. **Glaciers.**—Norway is one of the four glacial regions of Europe. The chief Névé fields from which the glaciers descend to the sea are

- a. *The Folgefond* on the N. side of the Hardanger Fjord, which sends off the "Bondhuus" and the "Brier" glaciers.
- b. *The Jostedals Bræ*, N. of the Sogne Fjord, from which flow the "Lodal," "Nygaard," and "Brixdal" glaciers.

CLIMATE.—Owing to the high latitude of Norway the climate is rigorous; but owing to its great extent from N. to S. it is also very varied. In the N. the *mean annual temperature* is below freezing point; and it is warmer in the W. than in the E. owing to the warm ocean currents which wash the W. shores. The *winters* are long and severe, intense frost prevailing in the N. parts from October to April, and snow covering the ground from September to April. The *summers*, which last but two months, July and August, are exceedingly hot, in consequence of the long time the sun is above the horizon.

PRODUCTIONS.—So large a proportion of Norway consisting of rock, forest, and water, but a very small part of its area is under cultivation.

Its characteristic productions are oats, barley, rye, and potatoes; timber—spruce fir, and pine—iron, copper, and silver. Its distinctive *animals* are the bear, wolf, elk, reindeer, and lemming; cod and herring are plentiful in the neighbouring seas, and salmon in many of the rivers.

PEOPLE AND LANGUAGE.—The *People* numbered 1,807,555 in 1875, and consisted of Norwegians, or Northmen chiefly. There are also some Lapps, and some Finns. The *Language* of the country is Norse, or Norwegian, a Teutonic dialect.

POLITICAL GEOGRAPHY.

DIVISIONS.—Norway is divided into 6 *Stifts* or *Dioceses*, which are again subdivided into 17 *Amts* or *Provinces*. The *stifts* with their chief towns are

STIFTS.	CHIEF TOWNS.	STIFTS.	CHIEF TOWNS.
1. Tromsø . . .	Tromsø, Hammerfest.	4. Christiansand	Christiansand, Stavanger.
2. Trondhjem .	Trondhjem, Christiansund.	5. Christiania ..	Christiania, Drammen.
3. Bergen	Bergen, Aalesund.	6. Hamar	Hamar, Kongsvinger.

NOTES ON THE TOWNS.—The six **most populous** towns of Norway are *Christiania* (76,876), *Bergen* (34,388), *Trondhjem* (22,541), *Stavanger* (20,288), *Drammen* (18,838), *Christiansand* (12,137).

Obs. **Christiania**, the capital, lies in the S.E., at the head of the Christiania Fjord, and about 80 m. from the sea. It is beautifully situated, is the seat of the king, of parliament, and of an important university, and has a fine public library. It is the chief port of Norway, and the principal emporium for the produce of the country. Its *exports* are timber, pitch, seal-skins, and fish. Its *industrial establishments* include weaving, cotton-spinning, paper, and saw-mills, soap, and oil works, breweries, distilleries, and tobacco factories.

Bergen is famous as an important sea-port and seat of commerce, and as the wettest city in Europe; *Trondhjem* or *Drontheim*, as the old capital, and for its interesting cathedral, wherein the Norwegian Kings are crowned; *Stavanger*, for its antiquity and its cathedral, for its port, and its herring trade; *Drammen*, as a port, and for its educational institutions; *Christiansand*, for its fine cathedral, and its lobster trade; and *Hammerfest*, as being the most N. town in Europe.

Horten, the chief naval station and marine depot in Norway; *Fredericksværn*, also an important naval station, with a naval academy; and *Röros*, the chief town in the copper mining district, are other important Norwegian towns.

INDUSTRIES.—The chief *industries* of Norway are connected with

1. *Forests*, which supply timber, pitch, and tar, to the chief navies of Europe.
2. *Mines*, whence comes the most excellent iron.
3. *Fisheries*, which send supplies to the markets of Europe.
4. *Navigation*, which furnishes the navies of all nations with first-rate sailors.

Obs. The principal *manufactures* are those done by the peasants who make their own clothing, furniture, and other articles of domestic use.

COMMUNICATIONS.—Norway possesses excellent *high-roads*, about 520 m. of *railway*, and extensive *telegraphic communications*.

GOVERNMENT, RELIGION, AND EDUCATION.—The *Government* of Norway is a constitutional monarchy, under the same King as Sweden. But Norway has its own constitution, its own legislature, and its own laws. The prevailing *Religion* is Lutheranism. *Education* is compulsory for children of from seven to fourteen years old, and every parish has its own school.

SWEDEN.

PHYSICAL GEOGRAPHY.

Latitude. 55° 20' and 69° N. *Longitude.* 11° 20' and 24° E. *Area.* 170,690 sq. m.

POSITION AND BOUNDARIES.—Sweden forms the E. part of the Scandinavian peninsula, and lies in the N.W. of Europe. It is bounded on the

N. by Norway. E. by Russia, the Gulf of Bothnia, and the Baltic Sea. S. by the Baltic. W. by the Sound, the Kattegat, the Skager Rack, and Norway.

COASTS.—The coasts generally are low, and embrace numberless small fjords and bays, most of which are studded with low and sandy islets. Their main features are the

1. **Capes**, Falsterbo in the S. W., and Hornsland in the Gulf of Bothnia.
2. **Inlets**, the Bay of Carlsrona on the S.E., and Stockholm Bay on the E.
3. **Straits**, the Sound, Kalmar Sound, and Aland Haf (*haven*), between the mainland and the islands of Zealand, Öland, and Aland, respectively.

ISLANDS.—The chief are Öland, and Gothland, off the S. E. coasts.

Obs. 1. **Öland** is thickly inhabited by an agricultural and seafaring population. It also possesses a valuable alum mine.

Obs. 2. **Gothland** or **Gotland**, the largest island of Sweden, has a population of 54,964, who live chiefly by agriculture and grazing, and who are remarkable for their primitive simplicity of speech and manners.

SURFACE.—The most striking physical features of Sweden are its countless rivers and lakes, which occupy more than a tenth part of the entire surface, and the terrace-like plateaux, by which the country descends from Norway towards the Baltic. Of the

1. **Mountains**, the chief are

The *Kiölen Range* between N. Sweden and Norway, see p. 55.

Obs. Many transverse ranges branch E. from the Kiölen Mountains which shew summits of over 3,000 ft. in height; and the loftiest, *Sylfellen* (5,860 ft.) is covered with perpetual snow.

2. **Plateaux**, the most important of which are the
 - a. *Tableland of Jemtland*, a lofty district with a mean elevation of 1,000 ft. branching off to the S.E., from the S. extremity of the Kiölen Mts.
 - b. *Tableland of Smaland*, an extensive and, for the most part, barren tract between the 56th and 58th parallels.
3. **Plains**, of which the chief are the
 - a. *Great Eastern Plain*, which lies about lakes Mälär and Hjöelmar, and embraces the largest extent of lowland in Sweden.
 - b. *Plain of Lynköping*, which stretches from lake Wetter to the Baltic, and is one of the most fertile tracts in Sweden.
 - c. *Plain of Scania*, which lies in the S. and is also fertile in parts.

DRAINAGE.—The copious drainage of Sweden flows to the sea down two slopes, which turn S.E. towards the Baltic, and S.W. towards the Kattegat, respectively. The main drainage agents are the

1. **Rivers**, which are exceedingly numerous, and to a small extent navigable. Those flowing into the
 - a. *Baltic*, are the Tornea, Lulea, Pitea, Umea, Angerman, Dal, and Motala.
 - b. *Kattegat*, the Atran, and Götha.

Obs. 1. The Tornea issues from Lake Tornea, flows S.E., and with its tributary, the Muonio, forms the boundary between Sweden and Russia.

Obs. 2. The Götha flows from Lake Wener, and runs S., forming in its course the famous falls of Trollhättan.

2. Lakes, the largest of which are

a. Wener, in the S.W., the largest lake in Europe after Ladoga. Its area is 2,150 sq. m. Its surplus waters flow to the Kattegat through the Götha river.

b. Wetter, S.E. of Wener, with which it is connected by a canal. It is drained into the Baltic by the Motala river.

c. Mälar, which extends inland from the Baltic Sea about 70 m.

CLIMATE.—The climate of Sweden is drier than that of Norway, and, as compared with the normal climate of its latitude, temperate. The *winters* are long and cold, the ground being covered with snow, and the rivers and lakes being frozen from October to April. The *summers* are short and hot.

PRODUCTIONS.—The soil of Sweden is, generally speaking, scanty, poor, and infertile. The characteristic productions are the same as those of Norway (see p. 56), but the *reindeer* should be added to the animals.

Obs. Swedish iron is said to be the best iron in the world.

PEOPLE AND LANGUAGE.—The *People* in 1879 numbered 4,577,783 souls, who are mostly Swedes and Teutons, *i.e.* of the Scandinavian branch of the Aryan family. There are some few Lapps and Finns. The *Language* is Swedish, a dialect of the Teutonic group of languages.

POLITICAL GEOGRAPHY.

POLITICAL DIVISIONS.—The kingdom of Sweden consists of three great regions, which are divided into 24 *Län*, or governments, and Stockholm, which is a government of itself. These divisions, with their chief towns, are as follows—

LÄN OR GOVERNMENTS.	CHIEF TOWNS.	LÄN OR GOVERNMENTS.	CHIEF TOWNS.
I. NORRLAND (= North Land), 5 Län.			
1. Norbotten	Piteå.	4. Westernorrländ	Hernösand.
2. Westerbetten	Umeå.	5. Gefleborg	Gefle.
3. Jemtland	Ostersund.		
II. SVEALAND (= Sweden Proper), 8 Län.			
6. Kopparberg	Fahlun.	10. Stockholm (Town) ..	Stockholm.
7. Wermland	Carlstad.	11. Stockholm	Stockholm.
8. Örebro	Örebro.	12. Upsala	Upsala.
9. Westmanland	Westerås.	13. Södermanland	Nyköping.
III. GOTHLAND (=Götha Rike), 12 Län.			
14. Gothland	Wisby.	20. Kalmar	Kalmar.
15. Göteborg and Bohus	Göteborg.	21. Jönköping	Jönköping.
16. Elfsborg	Wenersborg.	22. Krenoberg	Wezio.
17. Skaraborg	Skara.	23. Blekinge	Carlsrona.
18. Halland	Halmstad.	24. Christianstad	Christianstad.
19. Östergötland	Linköping.	25. Malmöhus	Malmö.

NOTES ON THE TOWNS.—The six most populous towns of Sweden are *Stockholm* (165,677), *Göteborg* (71,707), *Malmö* (34,439), *Norrköping* (27,226), *Gefle* (18,137), *Carlskrona* (17,787).

Obs. *Stockholm* (*Isle of Piles*), called "the Venice of the North," is the capital, the chief seaport, and the principal commercial emporium, of Sweden. Its principal public buildings are the *Cathedral* and the *Royal Palace*. *Stockholm*, like Venice, is built upon piles, and stands at the E. end of Lake Mälär.

Göteborg, *Malmö*, *Norrköping*, and *Gefle* are important sea-ports of Sweden. *Carlskrona* is the chief naval port. *Upsala* is the ecclesiastical metropolis, and the chief University town of Sweden. *Linnæus*, the great botanist, was a professor in the University of *Upsala*.

INDUSTRIES.—As in Norway, so in Sweden, the chief industries are connected with the *Forests*, *Mines*, *Fisheries*, and *Navigation*. In addition to these, *agricultural pursuits* and *manufactures* are largely followed in Sweden. The chief exports are timber, fish, iron, and oats; the chief imports, textile fabrics, coal, machinery, and colonial produce.

COMMUNICATIONS.—Sweden possesses excellent macadamised *High-Roads*; good and increasing *Railways*; *Canals*, *Navigable Rivers*, and *Telegraphic Communications*.

GOVERNMENT, RELIGION, AND EDUCATION.—These are of the same character as in Norway, see p. 57. Still, though the two countries are united under one monarch, they have distinct laws, independent legislative assemblies, and each takes the title of *kingdom*.

DENMARK.

PHYSICAL GEOGRAPHY.

Latitude. Between 54° 35' and 57° 45' N. *Longitude.* Between 8° 5' and 12° 45' E.
Area. 14,755 sq. m., or less than half that of Scotland.

The kingdom of Denmark (= Dane-march, or frontier of the Danes) embraces the N. part of the Cimbrian peninsula (Jutland), and an archipelago of some 200 islands and islets in its vicinity.

POSITION AND BOUNDARIES.—Denmark lies on the W. coast, and S. of Scandinavia. It is bounded on the

N. by the Skager Rack. E. by the Kattegat, Sound, and Baltic. S. by the Baltic, and Schleswig. W. by the North Sea.

COASTS.—The coasts are generally low, and on the W. are skirted by dangerous reefs and sandbanks. The extent of coast-line is relatively very large. The chief

1. *Capes*, are the Skaw, at the N.E. extremity, and the Horn, in the S.W.
2. *Inlets*, are Tannis, Jammer, and Vixö Bays, on the N.W.; Liim, and Ringkjöbing fjords, on the W.; Kalö Bay, Horsens Fjord, and Veile Fjord, on the E.

Obs. The Liim Fjord stretches from the N. Sea to the Kattegat.

3. **Straits, and Channels** are the Skager Rack, Kattegat, Great Belt (between the islands Zealand and Funen), the Little Belt (between Funen and the mainland), and the Sound, between Zealand and Sweden.

ISLANDS.—More than a third part of Denmark consists of islands. The chief of them are Zealand, Funen, Langeland, Laaland, Falster, Bornholm, Möen, and Samsö.

Obs. 1. Zealand (Seeland) is the largest and most important of the Danish islands. It contains Copenhagen, the capital of the kingdom.

Obs. 2. Bornholm, the most easterly of the Danish islands, lies outside the limits of longitude given above.

SURFACE.—The surface of Denmark exhibits but little variety. It is generally low, *Himmels Berg* (564 ft.) being the loftiest point in the country.

DRAINAGE.—Nearly the whole of Jutland is drained into the North Sea; but neither on the *peninsular* nor the *insular* parts are there any large rivers, or large lakes.

CLIMATE.—The climate, generally speaking, is comparatively temperate, the *mean annual temperature* at Copenhagen being 47°.18 Fahr. It is very wet, but not unhealthy. The *winters* are cold, and the channels among the islands are frequently ice-bound.

PRODUCTIONS.—The soil is rich, the ground fertile, and the productions, though not very varied, are valuable. The *Animals* of Denmark present no peculiarities, and there are but few *Minerals*. Grain, and potatoes, are the principal *agricultural* products; the seas are well supplied with fish.

PEOPLE AND LANGUAGE.—The *People* are Danes or Scandinavians, and in 1870 numbered 1,784,741. Their *Language* is closely allied to the languages of Sweden and Norway. But the islanders and those dwelling on the mainland speak widely different dialects.

POLITICAL GEOGRAPHY.

POLITICAL DIVISIONS.—Denmark is divided into 18 Amter, or districts, 9 of which are in Jutland, and 9 in the islands. With their chief towns they are given in the table.

ISLANDS.		JUTLAND.	
AMTER.	CAPITALS.	AMTER.	CAPITALS.
1. Copenhagen {	Copenhagen, Elsinore.	10. Hjørring	Hjørring.
2. Frederiksborg	Frederiksborg.	11. Thisted	Thisted.
3. Holbæk	Holbæk.	12. Aalborg	Aalborg.
4. Sorø	Sorø, Slagelse.	13. Viborg	Viborg.
5. Præstø	Præstø, Nestved.	14. Randers	Randers.
6. Bornholm	Rønne.	15. Aarhus	Aarhus, Horsens.
7. Odense	Odense, Assens.	16. Veile	Veile, Fredericia.
8. Svendborg	Svendborg, Nyborg.	17. Ringkjøbing ...	Ringkjøbing.
9. Maribo	Maribo, Nakskov.	18. Ribe	Ribe.

NOTES ON THE TOWNS.—The six most populous towns are *Copenhagen* (181,291), *Odense* (16,970), *Aarhus* (15,025), *Randers* (11,354), *Aalborg* (11,721), *Horsens* (10,501).

Obs. *Copenhagen* (*Merchant's Haven*), the capital of Denmark, is situated on the E. coast of Zealand and on the small adjacent island Amager. It is strongly fortified, and contains a fine harbour, a university, a good public library, and a museum rich in northern antiquities. Many of the finest works of *Thorwaldsen*, the Danish sculptor, are treasured up in *Copenhagen*.

The six chief sea-ports, are *Copenhagen*, *Elsinore*, *Korsør*, *Aarhus*, *Aalborg*, and *Frederikshavn*.

Odense, the chief town of Funen, *Aalborg*, and *Aarhus*, are manufacturing towns. *Elsinore* is famous as the scene of Shakespeare's "Hamlet."

INDUSTRIES.—The chief industries are *Agriculture*, *Grazing*, and *Fishing*. The chief exports are corn, cattle, butter, and hides; the chief imports, colonial produce, iron, and timber. The *Manufactures* are not important.

COMMUNICATIONS.—The country is traversed by good *High-Roads*; there are also nearly 1,000 m. of *Railway*; and all the coast towns of importance have good *Steam-boat* services. There are also about 2000 m. of *Telegraph Lines*.

GOVERNMENT, RELIGION, AND EDUCATION.—The *Government* is a constitutional and hereditary monarchy; the *Religion* is *Protestant*, and 99 per cent. of the people are *Lutherans*. *Education* is widely diffused, and nearly every person can read and write.

FOREIGN POSSESSIONS.—These consist of *Iceland*, the *Faroe Isles*, *Greenland*, and the *Danish West Indies*, viz., *Santa Cruz*, *St. Thomas*, and *St. John*.

Obs. 1. *Iceland* lies just outside the Arctic Circle, 700 m. W. of Norway. Its area is 39,535 sq. m., its population, 69,763. The surface is mountainous, and a large proportion of it is covered with perpetual snow and ice. Subterranean fires rage throughout the island, and volcanoes form its most striking feature. *Mt. Hekla* (5,108 ft.) is the most famous of the volcanoes. A few miles N.W. of *Hekla* lie the celebrated hot-water springs called "the Geysers." The climate is fickle, the soil poor, and sterility is very general. The people are occupied in cattle-rearing, fishing, and hunting. The capital of *Iceland* is *Reykjavik*, near the S.W. corner. In 1874 *Christian IX.*, King of Denmark, conferred on the islanders a separate Constitution and an independent Administration.

Obs. 2. The *Faroe Isles* (*Sheep Isles*) are a group of some 35 islands and islets in the Atlantic, about midway between *Iceland* and *S. Norway*. They have a total area of 515 sq. m. and a population of 11,000. *Strömö* is the chief island, and *Thorshavn*, on the E. side of *Strömö*, is the chief town. The people, who are of *Scandinavian* origin, have occupied these islands since the 9th century.

THE NETHERLANDS, OR HOLLAND.

PHYSICAL GEOGRAPHY.

Latitude. Between 50° 45' and 53° 37' N. *Longitude.* Between 3° 24' and 7° 16' E. *Area.* 12,727 sq. m.

Obs. The Grand Duchy of *Luxemburg* is not included here.

POSITION AND BOUNDARIES.—The country of the Netherlands lies in the W. of Europe. It is bounded on the N. and W. by the North Sea. E. by Germany. S. by Belgium.

COASTS.—The coasts are everywhere low, and in the N. and S. are deeply penetrated by inlets of the sea. The most noteworthy coast features are the

1. **Capes De Helder** at the entrance to the Zuyder Zee, and Hoek-van-Holland, at the mouth of the Maas.
2. **Inlets**, the estuary of the Ems with the Dollart Zee, on the N.; the Zuyder Zee, estuary of the Maas, E. Schelde, and W. Schelde, on the W.

Obs. 1. The **Zuyder Zee** (*South Sea*, so called in contradistinction to the North Sea) is a vast gulf of the North Sea. It is shallow and, on the W. side, shoaly. An inlet called the Y, or Hot Y, branches off from the S.W. extremity towards the W. coast, and forms the harbour of Amsterdam. This inland sea was formed by a terrible inundation of the N. Sea, A.D. 1282.

3. **Straits and Channels**—Marsdiep, between Texel island and the mainland, the chief entrance to the Zuyder Zee from the W.; Goedereed Gat, or Haring Vliet, between the islands Beyerland and Overflakke; Brouwershaven Gat, or Krammer, between the island Overflakke and the mainland.

ISLANDS.—The Dutch islands consist of two well defined groups, which lie, respectively, on the N.W., off the Zuyder Zee, and on the S.W. among the mouths of the Rhine, Maas, and Schelde. The chief islands of the

1st Group, are Texel, Vlieland, Ter Schelling, and Ameland.

2nd Group—Ysselmonde, Beyerland, Overflakke, Schouwen, N. and S. Beveland, and Walcheren.

Obs. 1. **Texel**, the chief island of the first group, is 13 m. long, and 6 m. broad, and has a population of about 5,000, who are mostly engaged in agriculture and seafaring pursuits. The remaining islands are all inhabited and afford the same kinds of resources to the people as does Texel.

Obs. 2. **Walcheren**, the principal island of the S.W. group, has a population of upwards of 40,000. Its surface, lying below the level of the sea, is protected from inundation by dykes and dunes. The soil is fertile, but the climate is very insalubrious. The other islands of this group are of the same general character as Walcheren, being low, fenced by dykes and sandhills, fertile,—producing large crops of grain and madder,—and very unhealthy.

SURFACE.—The country in its general aspect is flat and monotonous in the extreme, and many parts of it lie even considerably below the level of the sea. Originally, these low regions were great morasses; but, having been drained, they are now amongst the richest and most fertile tracts in Holland. There are no mountains, no rocks, and not much wood.

DRAINAGE.—Holland is amongst the most copiously watered countries of the world. Its general slope is westward, and all its drainage flows, or is conducted by a vast network of canals, to the North Sea. The chief

Rivers may be grouped into those which flow to the

1. **North Sea**, viz., the Schelde, Maas or Meuse, and Rhine.
2. **Zuyder Zee**, viz., the Amstel, Yssel, and Vecht.

Obs. 1. The **Schelde**, or **Scheldt**, rises in N. France, traverses Belgium and the S.W. part of Holland, and after a generally Northward course of 210 m., enters the North Sea by two mouths—the E. and W. Scheldes. Its chief tributaries are the Scarpe, and the Lys, on the left bank; the Dender, and Rupel—formed by the union of the Senne, Dyle, and Nethe—on the right bank.

Obs. 2. The **Rhine**, see p. 20.

CLIMATE.—The climate of Holland is humid, raw, and often foggy. The *mean annual temperature* may be compared to that of England, but while the summers are hotter than ours, the winters are colder, the canals being often frozen for months together, and sometimes, the Zuyder Zee also.

PRODUCTIONS.—About half the soil of Holland is rich and fertile, and produces good crops of oats, wheat, barley, and buckwheat; potatoes, chicory, and madder; hemp, flax, and hops. Waterfowl abound in the marshes, and storks are very numerous. The country also includes extensive deposits of turf, and potter's clay.

PEOPLE AND LANGUAGE.—The *People* are of Germanic race, and are called Dutch; they numbered 3,924,792 in 1877. The *Language* of the country is Dutch.

POLITICAL GEOGRAPHY.

POLITICAL DIVISIONS.—Holland is divided into 11 *Provinces*. The Grand Duchy of Luxembourg is also connected with the country through the Sovereign, but it has a separate administration.

PROVINCE.	CAPITAL.	PROVINCE.	CAPITAL.
1. Groningen ..	<i>Groningen.</i>	7. Utrecht ...	<i>Utrecht.</i>
2. Friesland ...	<i>Leeuwarden, Harlingen.</i>	8. S. Holland ..	<i>The Hague, Rotterdam.</i>
3. Drenthe	<i>Assen.</i>	9. Zealand ..	<i>Middleburg, Flushing.</i>
4. Overijssel ..	<i>Zwolle.</i>	10. N. Brabant	<i>Bois-le-Duc, Breda.</i>
5. N. Holland ..	<i>Amsterdam, Haarlem.</i>	11. Limburg ..	<i>Maastricht, Roermond.</i>
6. Guelderland.	<i>Arnhem, Nimeguen.</i>		
Luxembourg ..	<i>Luxembourg.....</i>	The larger part of the territory of this Duchy was lost in the Revolution of 1830. But the part about the town, with an area of 1,592 sq. m. and a population of 197,528, was left. By the treaty of London, May 11, 1867, the Duchy became neutral territory and the fortress was dismantled.	

NOTES ON THE CHIEF TOWNS.—The three **most populous cities** are *Amsterdam* (302,226), *Rotterdam* (142,585), *The Hague* (107, 897).

Obs. Amsterdam, or Amstel-dam (=the dam, or dyke, on the Amstel), the capital, lies on the little river Amstel, at its confluence with the Y. The city is built upon 90 islands, which are connected together by 290 bridges. It is traversed in every direction by canals, and ranks among the chief commercial cities in the world. The population includes 30,000 Jews, about a third part of whom are engaged in diamond-cutting.

The chief **sea-ports** are *Amsterdam, Rotterdam, Dordrecht, Harlingen, and Helder.*

The chief **manufacturing centres** are *Amsterdam, Rotterdam, the Hague, Arnhem, and Groningen.*

The seats of the Dutch **universities** are *Leyden, Groningen, and Utrecht.*

Other **notable Dutch towns** are *Maastricht*, a strong fortress on the Maas; *Delft*, "the parent of pottery;" *Zutphen*, where Sir Philip Sydney received his death wound; *Haarlem*, famous for its resistance against the Spaniards

in 1572 and 1573; *Zaandam*, where "Peter the Great" studied the art of ship-building; and *Schiedam*, the seat of the "Hollands" distilleries.

INDUSTRIES.—Holland is essentially a *Commercial Country*. *Pastoral Pursuits*, *Agriculture*, *Manufactures*, and *Fishing* come next in importance. The chief *Manufactures* are type-founding, sugar-refining, gin-distilling, ship-building, and diamond-cutting. The chief *exports* are butter, cheese, fat cattle, and refined sugar: the chief *imports*, cottons, woollens, yarns, iron machinery, and colonial produce.

COMMUNICATIONS.—*Canals* constitute the great commercial highways of Holland. There are also excellent services of *Highways*, *Railways*, and *Telegraphs*.

GOVERNMENT, RELIGION, AND EDUCATION.—The *Government* is an hereditary constitutional monarchy. *Religion* is chiefly Protestant—Calvinistic and Lutheran—but there are many Jews, and Roman Catholics also. *Education* has much improved of late years, but it is still in a comparatively backward state.

FOREIGN POSSESSIONS.—The foreign possessions of Holland have an aggregate area of 677,452 sq. m. and a population of 24,386,991.

Obs. The Dutch foreign possessions lie in

1. The **East Indies**—as *Sumatra*, *Java* and *Madura*, *Borneo*, the *Celebes*, *Papua* or *New Guinea*, the *Moluccas*, and numerous small islands and islets.
2. The **West Indies**—as *Amba*, *Curaçao*, *Buen Ayre*, and several small islands.
3. **South America**, viz., *Surinam* or *Dutch Guiana*.

BELGIUM.

PHYSICAL GEOGRAPHY.

Lat. Between 49° 30' and 51° 30' N. *Long.* Between 2° 33' and 6° 5' E. *Area.* 11,370 sq. m.

POSITION AND BOUNDARIES.—Belgium lies in the W. of Europe. It is bounded on the

N. by Holland. E. by Dutch Limbourg, Luxembourg, and Rhenish Prussia.
S. and S.W. by France. N.W. by the North Sea.

COASTS.—The coast of Belgium is of small extent, uniformly low, and unbroken by any cape or inlet of any importance.

SURFACE.—The country is, generally speaking, flat. The "Campine," a large and desolate tract of moorland, lies along the N.E. frontier. Ramifications of the Ardennes mountains cover certain districts in the S.E.: but there is no mountain range properly so called, nor is there any elevation of more than 2,000 ft. The remainder of the Belgian territory consists of slightly undulating plains, which are diversified by numerous woods.

DRAINAGE.—The drainage of Belgium flows down a gentle N.W. slope to the North Sea. The chief

Rivers are the

- a. *Maas* (Meuse), of which about 115 m. flows through Belgium, and its *tributaries* the Ourthe, and Sambre, on the right and left banks respectively.
- b. *Schelde*—see p. 63, *obs.* 1,—of which 108 m. is in Belgium, and its *tributaries* the Rupel, and the Lys.
- c. *Ezer*, a short navigable river which falls into the sea at Nieuport.

CLIMATE.—Belgium enjoys a moderately genial climate, somewhat like our own. The *summers*, however, are hotter, and the *winters* colder than in England. The *annual rainfall* at Brussels is 28 in. or 3 in. less than that at London.

PRODUCTIONS.—The soil is fertile and yields large crops of rye, wheat, and oats; flax, hemp, madder, and beet-root are also largely grown. Coal, and iron are the principal *minerals*.

Obs. The *Animals* of Belgium are of the same kinds as our own; but the Belgian draught-horses are famous for their strength and beauty.

PEOPLE AND LANGUAGES.—The *Population* of Belgium is 5,336,185; the *Language* is French.

Obs. Belgium is the most densely populated country in Europe. Many of the people speak *Dutch*, and many more *German*.

POLITICAL GEOGRAPHY.

POLITICAL DIVISIONS.—Belgium is divided into 9 *Provinces*, which, with their capitals and other chief towns, are as follows—

PROVINCES.	CAPITALS.	OTHER IMPORTANT TOWNS.
1. E. Flanders	<i>Bruges</i>	Courtrai, Ostend.
2. W. Flanders	<i>Ghent</i>	St. Nicholas, Alost.
3. Antwerp	<i>Antwerp</i>	Malines.
4. Brabant	<i>Brussels</i>	Louvain.
5. Limbourg	<i>Maastricht</i>	St. Trond.
6. Liège	<i>Liège</i>	Verviers, Seraing.
7. Namur	<i>Namur</i>	Dinant.
8. Luxembourg	<i>Arlon</i>	Neufchateau.
9. Hainault	<i>Mons</i>	Tournay.

NOTES ON THE TOWNS.—The six most populous towns are *Brussels* (164,598), *Antwerp* (155,820), *Ghent* (129,201), *Liège* (118,140), *Bruges* (44,950), and *Malines* (39,776).

Obs. **Brussels**, the metropolis of Belgium, the seat of parliament, and the residence of the king, is situated on the little river Senne. It is the chief seat of Belgian learning and industry. It is celebrated for its handsome churches, its public buildings, its parks, its art museums, its university and other seats of learning, and for its public libraries. It is a great focus of Belgian industries, and its lace and carpets are famous everywhere.

The chief *ports* are *Antwerp*, and *Ostend*.

The chief *manufacturing centres* are *Ghent*, *Liège*, *Malines*, and *Tournay*.

Other towns of note are *Spa*, and *Chaufontaine*, watering-places; and *Waterloo*, *Fontenoy*, *Oudenarde*, and *Ramillies*, scenes of famous battles.

INDUSTRIES.—The chief Industries are *Agriculture*, and *Pasturing*; *Manufactures*, especially of lace, carpets, fire-arms and machinery; and *Mining*, particularly of coal and iron.

COMMUNICATIONS.—The Belgian systems of *Railway* and *Telegraphic Communication* are noted for their completeness. The *Macadamised roads* are wide, abundant, and in excellent condition; there is also an extensive system of *Water Carriage* supplied by the numerous canals and navigable rivers.

GOVERNMENT, RELIGION, AND EDUCATION.—The *Government* is a *constitutional monarchy*. There are two chambers elected by the people, viz., the *Senate*, and the *Chamber of Representatives*. The *Religion* is chiefly Roman Catholic, but all religions are tolerated. *Education* is neither compulsory, nor generally diffused among the people, but is now advancing under the fostering care of the State.

FRANCE.

PHYSICAL GEOGRAPHY.

Latitude. Between 42° 20' and 51° 5' N. *Longitude.* Between 4° 48' W. and 7° 40' E.
Area. 204,208 sq. m.

POSITION AND BOUNDARIES.—France ("La France" = the country of the Franks) lies in the W. of Europe. It is bounded on the

N. by the Strait of Dover, Belgium, and Germany. E. by Germany, Switzerland, and Italy. S. by the Mediterranean and the Pyrenees. W. by the Bay of Biscay. N.W. by the English Channel, and the Strait of Dover.

COASTS.—The French coasts are bold, rocky, and much indented on the N.W.; elsewhere they are, for the most part, low and even. Of the

1. **Capes**, the most remarkable are Gris Nez, near the N.W. corner, La Hague, La Hague, St. Mathieu, Raz, and Penmark on the two N.W. peninsulas.
2. **Inlets**, the chief are the Gulf of the Seine, and Gulf of St. Malo, which wash, respectively, the shores of the N.W. peninsulas; the Bay of Biscay, on the S.W., and the Gulf of the Lion on the S.E.

ISLAND.—The chief island belonging to France is *Corsica*.

Obs. 1. Corsica, the most beautiful island in the Mediterranean, lies about 112 m. S.E. of the mainland, and forms a province of France, which has for its chief town Ajaccio, the birthplace of Napoleon I.

Obs. 2. The Channel Islands—*Alderney*, 10 m. W. of Cape La Hague, and famous for its breed of small cows; *Guernsey*, 30 m. W. of the coast of Normandy, also celebrated for its excellent breed of cows; and *Jersey*, the largest of these islands, which lies 15 m. W. of the coast of Normandy, and is noted for its fruit

and cattle—though belonging *geographically* to France, have *politically* formed part of the British possessions since the Norman Conquest.

Obs. 3. The other principal islands are *Ouessant* (Ushant), *Belle Isle*, *Noirmoutier*, *Yeu*, *Ré*, and *Oléron* in the Bay of Biscay.

SURFACE.—Extensive plains bounded by mountains, or hills, form the characteristic aspect of France. The most notable surface features are the

1. **Mountains**, of which there are six principal chains, viz.—

a. The *Pyrenees*, between France and Spain. Their highest summit on the French side is *Vignemale* (10,791 ft.).

b. The *Alps*, between France and Italy. Their loftiest peak is *Mont Blanc* (15,784 ft.). See pp. 18 and 19.

c. The *Cevennes*, W. of, and parallel with the Alps. Their highest point is *Mont Mézen* (5,755 ft.).

d. The *Mountains of Auvergne*, a branch of the Cevennes, which culminate in the *Puy de Sancy* (6,186 ft.).

e. The *Jura Mountains*, between France and Switzerland. Their culminating point is the *Crêt de la Neige* (5,656 ft.).

f. The *Vosges*, on the E. frontier, between France and Germany, with the *Ballon de Guebwiller* (4,694 ft.) for chief summit.

2. **Plateaux**, the most important of which are the

a. *Central Plateau*, which lies between the upper waters of the Garonne and the Loire. It is an extensive volcanic region, which embraces many mountain ranges, and includes much scenery of a wild and picturesque description.

b. *Plateau of Langres*, a rugged district in the N.E. between the head waters of the Seine and Saône, which is characterised by its alternations of forests and stony tracts.

3. **Plains**, of which the chief are the

a. *Plain of Orleans and Picardy*, which comprises the lower valley of the Seine, and part of the middle valley of the Loire. It is a region of great fertility, which produces much corn.

b. *Landes*, which consist of a great triangular waste of black and red sand, stretching N. from the Adour to the Gironde, and E. from the Bay of Biscay to the cultivated heights of Lot-et-Garonne. Heath, furze, and stunted broom are its characteristic products, while the general aspect of the plain is dreary and monotonous in the extreme.

Obs. There are also the *Plains of Paris*, in the N. part of the Middle Valley of the Seine, of *Poitou* and *Touraine*, in the S. part of the lower valley of the Loire, and of *Gascogne* and *Guienne*, in the lower valley of the Gironde, one of the chief *wheat* and *wine* growing districts in France.

DRAINAGE.—France is well watered, and sends her copious drainage down four slopes which incline, respectively, towards the North Sea, the English Channel, the Bay of Biscay, and the Mediterranean. The chief drainage agents are

1. **The Rivers** which flow down the

a. *Northern Slope*, into the North Sea, viz., the Moselle, Meuse (Maas), and Escaut (Schelde, p. 63).

b. *North Western Slope*, into the English Channel, viz., the Somme, and Seine.

c. *Western Slope*, into the Bay of Biscay, viz., the Loire, Charente, Dordogne, Garonne, Gironde, and Adour.

d. Southern Slope, into the Mediterranean, viz., the Rhône (p. 21), Aude, Herault, and Var.

Obs. 1. The *Seine*, which rises near Mt. Tasselot (Dep. Côte-d'Or), follows a sinuous N.W. course, passes Paris, and Rouen, and falls into the English Channel by a large mouth opposite to Havre. The chief *tributaries* are the Aube, Marne, and Oise, on the right bank; and the Yonne, Loing, and Eure on the left bank.

Obs. 2. The *Loire*, which rises in Mt. Gerbier-des-Joncs (Cevennes), flows N.W. past Orleans, Blois, Tours, and Nantes, and falls into the Atlantic near St. Nazaire. Its chief *tributaries* are the Maine, on the right bank, and the Allier, Cher, and Vienne on the left.

Obs. 3. The *Garonne*, which rises in the Spanish Pyrenees, flows N.W., and passing Toulouse, Agen, and Bordeaux, expands into the Gironde, under which name it enters the Atlantic. Its most important *tributaries* are the Ariège, Tarn, Lot, and Dordogne, on the right; and the Gers, and Baise on the left.

Obs. 4. The *Rhône*, which flows from the Alps of Switzerland, forms the lake of Geneva, separates, for some distance, France from Switzerland, enters France, and passing Lyons and Avignon, enters the Mediterranean by several mouths through the Gulf of the Lion. Its principal *tributaries* are the Ain, and Saône on the right, and the Isère, Drôme, and Durance on the left. (See p. 21.)

Obs. 5. A portion of the drainage of N. and N.E. France is carried to the North Sea by the *Moselle*, a tributary of the Rhine, the *Meuse*, and the *Escaut* (*Schelde*), rivers which have only part of their courses in France.

CLIMATE.—Speaking generally, the *climate* of France is temperate, the sky clear, the air pure, genial, and salubrious. Yet in the N. the *winters* are often rigorous, and last nearly half the year, while in the S. the *summers* are hot and long, the *winters* mild, and of but brief duration. In central France the temperature is mild and equable.

PRODUCTIONS.—France is celebrated for the fertile quality of its soil, and for the variety and richness of its productions.

The chief productions are corn, wine, olives, figs, plums, and beet-root; silk, and flax; coal, iron, building-stone, and mineral-waters; dairy produce and poultry.

Obs. 1. “*La Beauce*,” in the upper valley of the Loire, and “*La Brie*,” between the Seine and the Marne, are the greatest corn-growing regions in France, and are called “the granaries of Paris.”

Obs. 2. *Wine* is a French product *par excellence*, no less than one-twentieth part of the entire country being tilled for its growth. Of the 87 departments, 76 cultivate the vine; but three-fourths of the wine produced is drawn from some 30 departments.

PEOPLE AND LANGUAGE.—The *Population* of France in 1873 was 36,905,788; the *Language* is French.

Obs. In addition to French, *Italian* is spoken in Corsica, and *Basque* in the W. Pyrenees. Numerous dialects, called *Patois*, are also in use among the peasantry of many Departments.

POLITICAL GEOGRAPHY.

DIVISIONS.—For administrative purposes, France is divided into 87 *Departments*, each of which is under the government of a *Prefect*.

Obs. The Departments are subdivided into *Arrondissements*, governed by *sub-prefects*; the *Arrondissements* into *Cantons*, presided over by *magistrates*; and the *Cantons* into *Communes*, which are governed by *Mayors*.

The Departments, with their chief towns, are as follows—

DEPARTMENTS. ¹	CHIEF PLACES.	DEPARTMENTS. ¹	CHIEF PLACES.
I. 21 N.W. DEPARTMENTS.			
1. Nord	Lille, Roubaix.	12. Orne	Alençon.
2. Pas-de-Calais	Arras, Calais.	13. Manche	Saint-Lô.
3. Somme	Amiens, Abbeville.	14. Ille-et-Vilaine	Rennes, St. Malo.
4. Seine-et-Oise	Versailles.	15. Côtes-du-Nord	Saint-Brieuc.
5. Seine	Paris, St. Denis.	16. Finistère	Quimper, Brest.
6. Seine-et-Marne	Melun.	17. Morbihan	Vannes.
7. Oise	Beauvais.	18. Loire-Inférieure	Nantes.
8. Aisne	Laon.	19. Maine-et-Loire	Angers.
9. Seine-Inférieure	Rouen, Havre.	20. Mayenne	Laval, Mayenne.
10. Eure	Évreux.	21. Sarthe	Le Mans.
11. Calvados	Caen.		
II. 11 N.E. DEPARTMENTS.			
22. Ardennes	Mézières, Sedan.	28. Vosges	Épinal.
23. Marne	Châlons, Reims.	29. Haute-Rhin	Belfort.
24. Aube	Troyes.	30. Haute-Saône	Vesoul.
25. Haute-Marne	Chaumont.	31. Doubs	Besançon.
26. Meuse	Bar-le-Duc.	32. Jura	Lons-le-Saunier.
27. Meurthe-et-Moselle	Nancy, Toul.		
III. 22 CENTRAL DEPARTMENTS.			
33. Ain	Bourg.	44. Allier	Moulins.
34. Saône-et-Loire	Mâcon, Creuzot.	45. Creuse	Guéret.
35. Côte-d'Or	Dijon.	46. Vienne	Poitiers.
36. Yonne	Auxerre.	47. Deux-Sèvres	Niort.
37. Loiret	Orléans.	48. Vendée	La Roche-Sur-Yon.
38. Eure-et-Loir	Chartres.	49. Charente-Inférieure	La Rochelle.
39. Loir-et-Cher	Blois.	50. Charente	Angoulême.
40. Indre-et-Loire	Tours.	51. Haute-Vienne	Limoges.
41. Indre	Châteauroux.	52. Corrèze	Tulle.
42. Cher	Bourges.	53. Cantal	Aurillac.
43. Nièvre	Nevers.	54. Puy-de-Dôme	Clermont-Ferrand.
IV. 13 S.E. DEPARTMENTS.			
55. Loire	Saint-Etienne.	62. Alpes-Maritimes	Nice, Mentone.
56. Rhône	Lyons.	63. Corse	Ajaccio.
57. Haute-Savoie	Annecy.	64. Var	Draguignan.
58. Savoie	Chambéry.	65. Basses-Alpes	Digne.
59. Isère	Grenoble.	66. Bouches-du-Rhône	Marseille, Aix.
60. Drôme	Valence.	67. Vaucluse	Avignon.
61. Hautes-Alpes	Gap, Briançon.		
V. 20 S. DEPARTMENTS.			
68. Haute-Loire	Le Puy.	78. Tarn-et-Garonne	Montauban.
69. Ardèche	Privas.	79. Lot-et-Garonne	Agen.
70. Lozère	Mende.	80. Dordogne	Périgueux.
71. Gard	Nîmes.	81. Gironde	Bordeaux.
72. Hérault	Montpellier.	82. Landes	Mont-de-Marsan.
73. Aude	Carcassonne.	83. Gers	Auch.
74. Tarn	Albi.	84. Hautes-Pyrénées	Tarbes.
75. Haute-Garonne	Toulouse.	85. Basses-Pyrénées	Pau, Bayonne.
76. Aveyron	Rodes.	86. Ariège	Foix.
77. Lot	Cahors.	87. Pyrénées-Orientales	Perpignan.

NOTES ON THE TOWNS.—The ten most populous towns of France are, Paris (1,988,806), Lyons (342,815), Marseilles (318,868), Bordeaux (215,140), Lille (162,776), Toulouse (131,642), Nantes (122,247), St. Etienne (126,019), Rouen (104,902), and Havre (92,068).

¹ Nearly all the Departments are named from the rivers or mountains which traverse them.

Obs. **Paris**, the metropolis of France, is the most beautiful and, next to London, the largest city in Europe. It stands on both banks of the Seine, and is traversed in every direction by grand streets, which are planted with trees, and called *boulevards*. In the culture of arts, sciences, and letters, Paris is unrivalled. It is remarkable also for the number and variety of its public monuments, and for the charming parks and promenades in its immediate vicinity.

The five **naval ports** of France are, *Cherbourg*, opposite Southampton, *Brest*, opposite Plymouth, *Lorient*, and *Rochefort*, on the W. coast; and *Toulon*, on the Mediterranean coast.

The ten **chief commercial ports** are *Marseilles*, *Havre*, *Bordeaux*, *Nantes*, *Rouen*, *Dunkirk*, *Cette*, *Calais*, *Dieppe*, and *Boulogne*.

The **chief industrial centres** are *Paris* (jewelry, horlogerie, printing, &c., &c.), *Lyons* (silks, gold and silver lace, chemicals, &c.), *Marseilles* (soap, and sugar-refining), *Bordeaux* (cottons, woollens, chemicals, &c.), *Lille* (cottons, linen, lace, hosiery, sugar, &c.), *Toulouse*, *St. Etienne*, *Creuzot*, *Anzin*, *Nantes*, *Rouen* (cottons).

Other notable places are, *Versailles*, near Paris, the residence of the French kings of the 17th and 18th centuries. *Agincourt*, *Crécy*, *Poitiers*, *Orléans*, and *Malplaquet*, all intimately associated with various periods of English history.

INDUSTRIES.—More than half the French people are engaged in *Agricultural* and *Pastoral* pursuits. The *Manufactures* comprise silks, cottons, woollens, linen, hosiery, jewelry, horlogerie, hardware, arms, books, cutlery, machinery, china, paper, sugar, soap, &c., and bid fair to rival those of England in every respect. *Mining* is also a very important branch of French industry. The **chief exports** are wine, fruits, corn, jewelry, spirits, silk and cotton fabrics, &c.; the **chief imports** are raw silk, cotton, and linen.

COMMUNICATIONS.—France is traversed in every direction from border to border with excellent systems of *Roads*, *Railroads*, *Canals*, and *Navigable Rivers*; she has also a highly developed *Telegraphic Service*.

GOVERNMENT, RELIGION, AND EDUCATION.—The *Government* of France is a *Republic*, the supreme power being vested in the *National Assembly*, the members of which are elected by universal suffrage. The *Religion* of France is Christianity, the prevailing form of it being Roman Catholicism. *Education* is being warmly fostered, and is rapidly becoming general.

FOREIGN POSSESSIONS.—The French possessions in Africa, Asia, America, and Oceania are in *area* nearly twice as large as continental France, and embrace a population of more than six millions. They are

1. **COLONIES IN**

- a. *Africa*, viz., *Algeria*, *Senegal Settlements*, the islands *Réunion* or *Bourbon*, *Mayotte*, *Nossi-Bé*, and *Ste. Marie*.
- b. *Asia*, viz. (1) *Indian Possessions*, as *Pondicherry*, *Karikal*, *Mahé*, *Yanaon*, and *Chandannagar*—(2). *French Cochín-China*.
- c. *America*—viz., *Guiana* or *Cayenne*, *Guadeloupe* and *Dependencies*, *Martinique* *St. Pierre*, and *Miquelon*.
- d. *Oceania*—viz., *New Caledonia*, *Loyalty Islands*, and *Marquesas Islands*.

2. **PROTECTORATES IN**

- a. *Asia*—viz., *The Kingdom of Cambodia*.
- b. *Oceania*—viz., *Tahiti* and *Dependencies*, *Toubouai*, and *Vavitou*, *Touamotou*, and *Gambier*.

THE SPANISH PENINSULA.

PHYSICAL GEOGRAPHY.

Latitude. Between 36° and 43° 48' N. *Longitude.* Between 9° 30' W. and 3° 20' E.
Area. 214,291 sq. m., of which 177,781 belongs to Spain.

POSITION AND BOUNDARIES.—The Spanish Peninsula, embracing the kingdoms of Spain and Portugal, lies in the S.W. of Europe. It is bounded on the

N. by France, and the Bay of Biscay. E. by the Mediterranean. S. by the Mediterranean, the Strait of Gibraltar, and the Gulf of Cadiz. W. by the Atlantic Ocean.

COASTS.—The coasts of the Spanish peninsula are remarkably even and unbroken, not being penetrated anywhere by any single deep inlet of the sea. The most important of the

Capes, are Peñas, and Ortegal, on the N.W.; Finisterre, Roca, Espichel, and St. Vincent, on the W.; Trafalgar,¹ Tarifa, and Gata, on the S.; Palos, Náo, Tortosa, and Creux, on the E.

Inlets, the Gulfs of Cadiz, and Almeria, on the S.; and the Gulf of Valencia, on the E.

Straits, that of Gibraltar, between Europe and Africa, is the chief.

ISLANDS.—The *Baleares*, in the Mediterranean, the *Canary Isles*, in the Atlantic, belonging to Spain: the *Azores*, and the *Madeira Isles*, in the Atlantic, belonging to Portugal, are the principal islands of this peninsula.

Obs. 1. The Balearic Isles (so called from the skill of the natives in slinging), are a group which lies from 75 to 200 m. off the E. coast of the Peninsula. Their aggregate area is 1860 sq. m., their population 288,747. Their chief productions consist of corn, fruit, and salt. They are 5 in number, viz., *Majorca*, *Minorca*, *Iviza*, *Formentara*, and *Cabrera*, and constitute a province of Spain. Their chief town is Palma, on the S.W. coast of Majorca.

Obs. 2. The Canary Isles (Dog Islands, so called because when discovered they abounded in wild dogs) are a group of small islands and islets lying 60 m. off the W. coast of Africa. Their aggregate area is 2,807 sq. m., and their population 283,402. They are volcanic and mountainous, rising, in the "*Pico de Teyde*,"² in the island Tenerife, to 12,185 ft. above the level of the sea. The chief productions are wine, oil, corn, and fruits of all kinds. The islands, of which Tenerife and Gran Canaria are the largest, form a province of Spain. Gran Palmas, the capital of the province, is on the N.E. side of Gran Canaria.

Obs. 3. The Azores are a group of 9 islands lying 800 m. W. of Portugal. Their total area is 922 sq. m., population 261,746. They are of volcanic origin and very subject to earthquakes. The productions are grain of all kinds, wines, bananas, oranges, and other tropical and subtropical fruits of the best quality. The people are a mixture of Portuguese and Negroes. The islands are St. Mary, St. Michael, Terceira, Graciosa, St. Jorge, Pico, Fayal, Flores, and Corvo; they form a colonial government and have for their capital, Angra, in Terceira.

Obs. 4. The Madeira Isles form a small archipelago which lies 660 m. S.W. off the coast of Portugal. Their united area is 314 sq. m., their population 121,753. The islands are of volcanic formation, mountainous, and well watered. The principal productions are wine, fruits, coffee, arrowroot, and sugar-cane. The group, of which Madeira and Porto Santo are the chief islands, constitutes a province of Portugal, with Funchal for its capital.

¹ Nelson gained his decisive victory over the French and Spanish fleets combined, and met with his own death (1805) near Cape Trafalgar.

² The *Pico de Teyde* is the famous volcano

which is better known as "*Teneriffe*." It is perpetually discharging streams of hot vapour; but there has been no eruption since 1798.

SURFACE.—The Spanish peninsula, after Norway, and Switzerland, is the most mountainous region in Europe. The most important surface features are the

1. **Mountains**, of which there are 5 principal chains, viz.: the
 - a. *Pyrenees*, which run E. and W. between France and Spain. Their chief summit on the Spanish side is *Pic Nethou* (11,168 ft.).
 - b. *Cantabrian Mountains*, which are a W. prolongation of the Pyrenees with chief summit, *Peña¹ Vieja* (8,740 ft.).
 - c. *Castilian Mountains*, which run through the middle of Spain from N.E. towards S.W. and culminate in *Plaza de Almanzor* (8,730 ft.).
 - d. *Sierra² Morena*, stretching E. and W., and forming the water-parting between the rivers Guadiana and Guadalquivir. The highest point, *Almenara* (5,910 ft.), is near the E. extremity of the range.
 - e. *Sierra Nevada*, which lies in the S.E., and embraces *Malahacen* (11,423 ft.) the loftiest summit of the Peninsula.

Obs. In addition there are the *Mountains of Toledo*, and the *Iberian Mountains*.

2. **Plateaux**, of which the following are the most important:
 - a. The *Plateau of Old Castile*, which lies between the Cantabrian and Castilian Mts., and is traversed by the Douro River.
 - b. The *Plateau of New Castile*, situated between the Castilian and Morena Mts. The N. portion is traversed by the Tagus, the S. by the Guadiana.
 - c. The *Tableland of Andalusia* in the S.W. of the Peninsula, which is traversed by the lower course of the Guadalquivir.

DRAINAGE.—The comparatively scanty drainage is carried down two great slopes, which incline W. towards the Atlantic, and E. towards the Mediterranean. The chief draining agents are the

1. **Rivers**, which flow down the—
 - a. *Western Slope*, into the Atlantic Ocean, viz., The Minho, Douro, Tagus, Guadiana, and Guadalquivir.
 - b. *Eastern Slope*, into the Mediterranean, viz., The Segura, Jucar, Guadalquivir, and Ebro.

Obs. 1. The *Minho*, which rises among the mountains of Galicia, reaches the ocean after a S. and S.W. course of 130 m. In its lower course it forms part of the boundary between Spain and Portugal.

Obs. 2. The *Douro*, which rises near Mt. Urbion in Old Castile, after a W. and S.W. course of upwards of 400 m. falls into the ocean a little below Oporto. In its middle course it forms part of the boundary between Spain and Portugal. Its chief *tributaries* are the Pisuerga, and Esca on the right bank; the Tormes, and Agueda on the left.

Obs. 3. The *Tagus*, which issues from Mt. St. Juan (Sierra d'Albarracin), after a W. and S.W. course of more than 500 m. reaches the sea near Lisbon. The chief *tributaries* are the Henares with its affluent the Manzanares, upon which stands Madrid, and the Alagon, both on the right bank.

Obs. 4. The *Guadiana*, which has its sources among the W. slopes of the Albarracin Mts., flows S.W. and S. over a course of more than 500 m. and falls into the Gulf of Cadiz. This also is a frontier river between Spain and Portugal.

Obs. 5. The *Guadalquivir* rises in the Sierra de Cazorla Mts., and flows W. and S.W. to the Gulf of Cadiz. Its chief *tributary* is the Gentil, on the left bank.

Obs. 6. The *Ebro* rises in the Cantabrian mountains, and after a S.E. course of 539 m. falls into the sea near Cape Tortosa. Its chief *tributary* is the Segre on the left bank.

Obs. 7. The rivers of this peninsula are not well adapted to purposes of navigation. Their streams are rapid, their beds are encumbered with rocks and shoals, and they are subject to floods from heavy rains and melting snows.

¹ *Peña* is the term applied in N. Spain to those comparatively small tower-like peaks which look like edifices built on the mountain tops.

² *Sierra*, and Portuguese, *Serra*, are terms applied to the mountain ranges of those countries,

most probably in reference to their barren summits. These terms are more commonly connected with Lat. *Serra* = "a saw," in allusion to the notched crests of the Spanish mountains.

CLIMATE.—The climate of the Spanish peninsula is very varied. On the N. and W. coasts it is humid and equable ; in the centre it is excessively dry, and there are extremes of heat and cold ; while in the S. and E. it is subtropical, tempered by delicious sea-breezes.

Obs. 1. While the annual rainfall is only about 10 in. in the centre of the peninsula, and about 20 in. on the S. and E. coasts ; it is 100 in. at Bilbao on the N. coast, and 118 at Coimbra on the W. coast.

PRODUCTIONS.—These are valuable and varied. The most characteristic are the Merino sheep, mules, asses, Andalusian horses, and apes ; grapes, oranges, olives, nuts ; cork ; mercury, copper, and lead.

PEOPLE AND LANGUAGES.—See pp. 75 and 77.

SPAIN.

POLITICAL GEOGRAPHY.

POLITICAL DIVISIONS.—The kingdom of Spain embraces about five-sixths of the peninsula. It is divided into 47—or, including the Balearic, and Canary Islands—into 49 *Provinces*, which for the most part are named after their chief towns.

Obs. As the old divisions into 13 *Kingdoms* and *Principalities* are still in use, they also are given in the following table.

OLD PROVINCES.	NEW PROVINCES.		OLD PROVINCES.	NEW PROVINCES.	
	NAMES OF.	CAPITALS.		NAMES OF.	CAPITALS.
I. CATALONIA ..	1. <i>Lerida</i>	<i>Lerida</i> .	VIII. ASTURIAS	27. <i>Oviedo</i>	<i>Oviedo</i> .
II. VALENCIA	2. <i>Gerona</i>	<i>Gerona</i> .	IX. OLD CASTILE..	28. <i>Santander</i> .	<i>Santander</i> .
	3. <i>Barcelona</i> ..	<i>Barcelona</i> .		29. <i>Palencia</i> ..	<i>Palencia</i> .
III. MURCIA	4. <i>Tarragona</i> ..	<i>Tarragona</i> .	X. BASQUE PROVINCES.	30. <i>Valladolid</i> .	<i>Valladolid</i> .
	5. <i>Castellon</i> ..	<i>Castellon</i> .		31. <i>Avila</i>	<i>Avila</i> .
IV. ANDALUCIA....	6. <i>Valencia</i> ..	<i>Valencia</i> .	XI. ARAGON	32. <i>Segovia</i> ..	<i>Segovia</i> .
	7. <i>Alicante</i> ..	<i>Alicante</i> .		33. <i>Soria</i>	<i>Soria</i> .
V. ESTREMADURA.	8. <i>Albacete</i> ..	<i>Albacete</i> .	XII. NEW CASTILE..	34. <i>Burgos</i> ..	<i>Burgos</i> .
	9. <i>Murcia</i> ..	<i>Murcia</i> .		35. <i>Logroña</i> ..	<i>Logroña</i> .
VI. LEON ..	10. <i>Almeria</i> ..	<i>Almeria</i> .	XIII. LA MANCHA.	36. <i>Alava</i>	<i>Vitoria</i> .
	11. <i>Granada</i> ..	<i>Granada</i> .		37. <i>Biscay</i> ..	<i>Bilbao</i> .
VII. GALICIA	12. <i>Jaen</i>	<i>Jaen</i> .	ISLANDS ..	38. <i>Guipuzcoa</i> .	<i>Toledo</i> .
	13. <i>Cordova</i> ..	<i>Cordova</i> .		39. <i>Navarra</i> ..	<i>Pamplona</i> .
	14. <i>Seville</i> ..	<i>Seville</i> .		40. <i>Saragossa</i> .	<i>Saragossa</i> .
	15. <i>Malaga</i> ..	<i>Malaga</i> .		41. <i>Huesca</i> ..	<i>Huesca</i> .
	16. <i>Cadiz</i>	<i>Cadiz</i> .		42. <i>Teruel</i> ...	<i>Teruel</i> .
	17. <i>Huelva</i> ..	<i>Huelva</i> .		43. <i>Guadala-jara</i> ..	<i>Guadala-jara</i> .
	18. <i>Badajos</i> ..	<i>Badajos</i> .		44. <i>Madrid</i> ..	<i>Madrid</i> .
	19. <i>Caceres</i> ..	<i>Caceres</i> .		45. <i>Cuenca</i> ..	<i>Cuenca</i> .
	20. <i>Salamanca</i> ..	<i>Salamanca</i> .		46. <i>Toledo</i> ..	<i>Toledo</i> .
	21. <i>Zamora</i> ..	<i>Zamora</i> .		47. <i>Ciudad-Real</i> ..	<i>Ciudad-Real</i> .
	22. <i>Leon</i>	<i>Leon</i> .		48. <i>Balears</i> ..	<i>Palma</i> .
	23. <i>Pontevedra</i> ..	<i>Pontevedra</i> .		49. <i>Canaries</i> ..	<i>Palmas</i> .
	24. <i>Corunna</i> ..	<i>Corunna</i> .			
	25. <i>Orense</i>	<i>Orense</i> .			
	26. <i>Lugo</i>	<i>Lugo</i> .			

NOTES ON THE TOWNS.—The five most populous towns of Spain are **Madrid** (367,284), **Barcelona** (215,965), **Valencia** (153,457), **Seville** (118,888), and **Malaga** (97,943).

Obs. **Madrid**, the Metropolis of Spain, lies on the little river Manzanares, at an elevation of above 2000 ft. above the sea. The city possesses some fine public buildings, chief among which are the Royal Palace, the Armoury and Museum, and the Amphitheatre. It also possesses one of the finest collections of paintings in the world. The famous "Escorial," which includes a royal palace, a monastery, and a mausoleum, lies 25 m. N.W. from Madrid.

The three chief naval ports of Spain are **Ferrol**, in the N.W., **Cadiz**, in the S.W., and **Cartagena**, in the S.E.

The five principal commercial ports are, **Barcelona**, **Cadiz**, **Valencia**, **Malaga**, and **Cartagena**.

The chief industrial centres are, **Barcelona** (the "Manchester of Spain"), **Valencia** (silks and velvets), **Murcia** (silks, cloths, pottery), and **Seville** (silks, woollen and linen cloths, arms and ordnance).

Other notable places are **Granada**, the magnificent old capital of the Moors, and the seat of the famous "Alhambra;" **Saragossa**, noted for its cathedral; **Talavera**, **Albuera**, **Salamanca**, **Badajos**, **Vitoria**, **San Sebastian**, famous for the glorious victories gained at them by the English during the Peninsular War; **Corunna**, the burial-place of Sir John Moore; **S. Lucar**, the port whence Magellan, and **Palos**, the port whence Columbus, sailed on their voyages of discovery; **Xeres**, which gives its name to the Spanish wine, Sherry; and **Almaden**, from which the famous quicksilver mines are named.

INDUSTRIES.—The principal industries of Spain are **Grazing**, **Agriculture**, and **Mining**. **Manufactures** are not very important. The chief exports are wine, fruits, minerals, and manufactured silks; the chief imports are foreign and colonial produce, cotton and woollen goods, machinery, and coal.

Obs. **Grazing** has for its chief objects, horses, sheep, and mules, which are reared in large numbers. **Agriculture** is principally concerned with the culture of the vine, fruits, and grain. **Mining** has for its chief objects mercury, and lead.

COMMUNICATIONS.—The **High Roads** are bad except just in the vicinity of large towns; and **Water Communications** are scarce. There are more than 4000 m. of **Railway**, and about 16,000 m. of **Telegraphic wires**.

GOVERNMENT, RELIGION, AND EDUCATION.—The **Government** of Spain is a constitutional Monarchy; the **Roman Catholic religion** prevails almost exclusively, but other religions are now tolerated; **Education** is in a very backward state, nearly three-fourths of the people being unable to read or write.

PEOPLE AND LANGUAGES.—In 1870 the **People** were estimated at nearly 17 millions who are of very mixed race, being descended from the Kelts, Romans, Goths, and Arabs, who have at successive periods ruled in the peninsula. The Roman element has, however, so dominated the others that the Spaniards are usually classed as one of the **Latin Races**. Their **Language** also belongs to the Latin family of languages.

Obs. The **Basques**, who occupy the four Biscayan provinces, belong to some Non-Aryan race, and speak a language peculiar to themselves.

COLONIAL POSSESSIONS.—Of the once splendid Colonial Empire of Spain, there remains only, in

1. **Africa.**—*The Presidios* (Ceuta, Tetuan, &c.), on the N. Coast of Morocco. *Annobon, Fernando Po, &c.*, in, and near, the Gulf of Guinea.
2. **Asia and Oceania.**—About half the *Philippine Isles*; the *Ladrones* or *Marianne Islands*; the *Caroline Islands*; and part of *Borneo*.
3. **West Indies.**—Part of the *Virgin Isles, Cuba, and Porto Rico*.

Obs. The total population of the Spanish Colonies is about 6½ millions.

PLACES WITHIN THE PHYSICAL LIMITS OF SPAIN BUT POLITICALLY SEVERED FROM HER ARE,

1. **Gibraltar**, at the S. extremity of the Peninsula, and on the strait, which connects the Atlantic with the Mediterranean. It was captured by the English, A.D. 1704, and has ever since formed an important part of the British Empire.
2. **Andorra**, a small republic in the S. valleys of the E. Pyrenees. Its *area* is about 600 sq. m. The *people*, who are of simple and primitive habits, number from 6,000 to 8,000 souls, and are occupied, mainly, in pastoral pursuits, and in the mining and manufacture of their iron. *Andorra*, the chief town, has a *pop.* of some 2,000.

PORTUGAL.

PHYSICAL GEOGRAPHY.

Latitude. Between 37° and 42° 8' N.

Longitude. Between 6° and 10° W.

Area. 86,510 sq. m.

BOUNDARIES, AND POSITION.—Portugal occupies the W. and S. W. part of the Spanish peninsula. It is bounded on the N. and E. by Spain. W. and S. by the Atlantic Ocean.

COASTS.—These include several excellent harbours, and some remarkable promontories. Their salient features are the

1. **Capes**, Mondego, Carvoeiro, Roca, Espichel, Sines, and St. Vincent, on the W.; Santa Maria on the S.
2. **Inlets**, viz., the Bays of Lisbon, Setubal, and Sines, on the W.

ISLANDS.—The *Azores*, and *Madeira Isles* (see p. 72).

SURFACE.—The surface of Portugal, like that of the peninsula in general, is mountainous, the chief mountains being continuations of the ranges which traverse the peninsula from E. to W. The Portuguese give special names to their portions of the great ranges, as *Serra da Estrella*, and *Serra de Monchique* to the W. extremities of the Castilian mountains, and the *Sierra Morena*, respectively.

DRAINAGE.—Portugal is mainly drained by the great rivers of the peninsula, the *Douro, Tagus, and Guadalquivir*, and their lower tributaries.

CLIMATE.—The climate is more genial and equable than that of the peninsula generally.

PRODUCTIONS.—The chief are *Fruits*—oranges, grapes, citrons, melons, figs, &c.; the most important *mineral* is salt.

Obs. The vineyards of the Upper Douro yield us our *Port Wine*; those in the vicinity of Lisbon, *Bucellas*, and *Carcavellos*.

PEOPLE AND LANGUAGE.—The *People* in the continental part of the kingdom are estimated at 4,057,538; they are of the same origin as the Spaniards, and their *language* differs from that of Spain only dialectically.

Obs. The population of the Azores is 261,746; that of the Madeira Isles 121,753.

POLITICAL GEOGRAPHY.

POLITICAL DIVISIONS.—Portugal is divided into 7 *Provinces*, which are named from their *geographical* position. These are subdivided into 17 *Districts*, which are named from the chief towns in each. To these are added the 2 Provinces formed by the Azores and Madeira Islands respectively. These divisions are given in the following table:—

PROVINCES.	DISTRICTS.	
	NAMES OF.	CHIEF TOWNS.
I. ENTRE DOURO ET MINHO (<i>i.e.</i> Between the Douro and Minho)	{ 1. <i>Viana</i>	<i>Viana</i> .
	{ 2. <i>Oporto</i>	<i>Oporto</i> .
	{ 3. <i>Braga</i>	<i>Braga</i> .
II. TRAZ-OS-MONTES (<i>i.e.</i> Beyond the mountains)	{ 4. <i>Bragança</i>	<i>Bragança</i> .
	{ 5. <i>Villa-Real</i>	<i>Villa-Real</i> .
	{ 6. <i>Aveiro</i>	<i>Aveiro</i> .
III. BEIRA ALTA	{ 7. <i>Coimbra</i>	<i>Coimbra</i> .
	{ 8. <i>Viseu</i>	<i>Viseu</i> .
IV. BEIRA BAIXA	{ 9. <i>Guarda</i>	<i>Guarda</i> .
	{ 10. <i>Castello-Branco</i> ..	<i>Castello-Branco</i> .
V. ESTREMADURA (<i>i.e.</i> Extrema Ora = the extreme boundary)	{ 11. <i>Leiria</i>	<i>Leiria</i> .
	{ 12. <i>Santarem</i>	<i>Santarem</i> .
	{ 13. <i>Lisbon</i>	LISBON.
VI. ALEMTEJO (<i>i.e.</i> Beyond the Tagus) ..	{ 14. <i>Portalegre</i>	<i>Portalegre</i> .
	{ 15. <i>Evora</i>	<i>Evora</i> .
VII. ALGARVE (<i>i.e.</i> The West)	{ 16. <i>Beja</i>	<i>Beja</i> .
	{ 17. <i>Faro</i>	<i>Faro</i> .
VIII. ISLANDS	{ 18. <i>Azores</i>	<i>Angra</i> .
	{ 19. <i>Madeira</i>	<i>Funchal</i> .

NOTES ON THE TOWNS.—The five most populous towns of Portugal are *Lisbon* (208,376), *Oporto* (89,194), *Braga* (19,514), *Funchal* (18,161), and *Coimbra* (18,147).

Obs. *Lisbon*, the metropolis, is near the mouth of the Tagus, and possesses a splendid harbour. Amongst its most handsome buildings are the Royal Palaces, the marble Aqueduct of Alcantara, and the old Cathedral. It is the naval port and arsenal of Portugal. A great part of the city was destroyed by the earthquake of 1875, when 16,000 persons perished.

The chief ports are *Oporto*, *Lisbon*, *Setubal*, and *Faro*.

The principal industrial centres are *Lisbon*—arms, porcelain, and jewelry; *Oporto* (jewelry and trinkets); *Braga* (firearms, jewelry, &c.); and *Coimbra* (earthenware, linen and woollen stuffs).

Other notable places are *Busaco*, *Almeida*, *Rolica*, *Vimiera*, *Torres Vedras*,

and *Cintra*, famous for their connexion with the English army and its exploits in the Peninsular War; and *Coimbra*, famous for its university.

INDUSTRIES.—The culture of the vine, and the manufacture of wine form the chief branches of Portuguese industry. The *Commerce* has been about stationary for the past 12 years.

Obs. The chief **exports** are wine, fruits, cattle, wool, and cork; and the chief **imports**, cotton and woollen fabrics, iron goods, earthenware, grain, &c.

COMMUNICATIONS.—The communications are deficient both in quantity and quality. They include *Highways*, *Railways*, *Telegraphs*, and a few miles of *Navigable Streams*.

GOVERNMENT, RELIGION, AND EDUCATION.—The *Government* is a constitutional Monarchy; the *Religion* is almost exclusively Roman Catholic; but there is toleration for other religions: *Education* is under State control, but attendance at the schools is very lax.

FOREIGN AND COLONIAL POSSESSIONS.—The colonial empire of the Portuguese is very considerable. It includes in

1. *Asia*.—*Goa*, *Salcete*, *Daman*, *Diu*, in Hindustan; *Macao* in China; *Kam-bing*, and parts of *Timor*, and *Solor*, in Malaysia.

2. *Africa*.—*Cape Verde Islands*; settlements, in Senegambia, and Guinea; the Islands *St. Thomas*, *Principe*, *Angola*, *Benguela*, *Mossamedes*, and *Ambriz*, on the W. coast; *Mozambique*, and *Sofala*, on the E. coast.

These possessions embrace a united area of upwards of 3,000,000 sq. m., and a pop. of 733,910.

ITALY.

PHYSICAL GEOGRAPHY.

Latitude. Between 36° 40' and 46° 40'. *Longitude.* Between 6° 32' and 18° 32' E.
Area. 114,380 sq. in. (including Sicily and Sardinia).

POSITION AND BOUNDARIES.—Italy is situated in the S. of Europe; it is bounded on the

N. by Switzerland and Austria. N.E. by Austria. E., S., and W. by the Mediterranean. N.W. by France.

COASTS.—These are remarkably even and unbroken, and therefore deficient in good harbours. The chief features to be noted are the

Capes, *Maestra*, *Leuca*, *Nau* or *Colonna*, *Rizzuto*, and *Spartivento*, on the E.; *Vaticano*, *Licosa*, *Campanella*, *Miseno*, and *Circello*, on the W.

Inlets, The Gulfs of *Venice*, *Manfredonia*, *Taranto*, and *Squillace*, on the E. The Gulfs of *Eufemia*, *Policastro*, *Salerno*, *Naples*, *Gaeta*, and *Genoa*, on the W.

Straits of *Otranto*, between Italy and Turkey; of *Messina*, between Italy and Sicily; of *Piombino*, between Italy and the Isle of Elba.

Obs. The famed rock *Scylla*, and the whirlpool *Charybdis* lie in the Strait of Messina.

ISLANDS.—The islands of Italy constitute more than a sixth part of the country. The chief of them are *Sicily*, and the *Lipari Isles*, off the S.W. coast; *Sardinia*, *Elba*, *Ischia*, and *Capri*, off the W. coast.

Obs. 1. *Sicily*, the largest island in the Mediterranean, lies at the S.W. point of Italy, from which it is separated by the Strait of Messina. Its area is 11,290 m., its population 2,584,099. The coasts are bold, rocky, and regular; their most striking features are the *Capes*, *Faro*, at the N.E., and *S. Vito* at the N.W. extremities of the island; and the *Gulfs* of *Palermo*, and *Castellamare*, on the N.W. coast. The surface, generally speaking, is mountainous, and the rivers small and not navigable. The productions include corn, wine, fruits, sulphur, and precious stones. The island forms a compartment of Italy, and its capital is *Palermo*, on the N. coast. *Etna*, the great Sicilian volcano, is near the E. coast.

Obs. 2. The *Lipari Isles* are a volcanic group of 13 small islands off the N.E. coast of Sicily. They contain 22,000 inhabitants, two thirds of whom belong to *Lipari*, the chief island. *Stromboli* (p. 19) and *Volcano* still exhibit active volcanoes.

Obs. 3. *Sardinia*, after Sicily, the largest and most important island in the Mediterranean, lies 140 m. W. of Italy, and is separated from Corsica by the Strait of Bonifacio. Its area is 9,363 sq. m., and its population 636,660. Its surface is mountainous, and culminates in *Mount Gennargentu* (6,293 ft.) near the centre of the island. The productions include cereals, fruits, wines, and timber. The capital is *Cagliari* in the S.

Obs. 4. *Elba*, the largest of a group of small islands off the coast of Tuscany, is separated from the mainland by the Strait of Piombino. It is chiefly famous for its connection with Napoleon I., who lived there from the 3rd May, 1814, to the 26th February, 1815.

Obs. 5. Belonging geographically to Italy, but politically to England are the Maltese islands, *Malta*, *Gozo*, and *Comino*.

Malta, the chief island of the group, forms a dependency of Great Britain, and lies 60 ms. S. of Sicily. It is fertile and yields abundant crops of grain and sub-tropical fruits; its oranges, figs, and olives being especially celebrated. The chief town is *Valetta*, which is one of the most strongly fortified positions in the British possession.

Obs. 6. Other islands of Italy are *Monte Christo*, *Ponza Isles*, and *Procida*, off the W. coast; the *Ægades*, off the W., and *Pantellaria* off the S.W. coast of Sicily.

SURFACE.—Northern Italy is flat, well watered, and, generally speaking, exceedingly fertile; but Central and S. Italy are mountainous. All these regions, however, embrace numerous plains, which help greatly to diversify and enrich the general aspect of the country. The most striking surface features are the

1. **Mountains**, of which there are the four great systems, viz., the

a. *Eastern Alps*, on the N.W. frontier, between Italy and Austria, which embrace the S. spurs of that part of the Alpine system which extends from the valley of the *Oglio*, on the W., to that of the *Isonza*, on the E.

b. *Central Alps*, on the N.W. frontier, between Italy and Switzerland, which embrace the S. side of the vast Alpine rampart, between the *Oglio* on the E. and *Mt. Blanc* on the W., and have for their highest Italian point *Mont Della Disgrazia* (12,074 ft.).

c. *Western Alps*, on the W. frontier, between Italy and France, which stretch S. from *Mt. Blanc* to the *Apennines*, and embrace the E. slopes of the great barrier between those two nations. Their loftiest point on the Italian side is the *Grand Paradis* (13,300 ft.), the highest point in Italy.

d. *Apennines*, which belong exclusively to Italy, traversing the whole territory from the *Maritime Alps* to the Strait of Messina. This long mountain chain is usually divided into three sections, viz., the

a. Northern Apennines, which stretch from the Maritime Alps to the source of the Arno, and culminate in *Monte Cimone* (7,112 ft.).

b. Central Apennines, running from the Arno to the Gran Sasso, the culminating mass of the whole system, the highest peak being *Monte Corno* (9,543 ft.).

c. Southern Apennines, which extend from the Gran Sasso to the Strait of Messina, and have their highest point in *Monte Amara* (8,999 ft.).

2. **Volcanoes**.—Italy is subject to powerful volcanic agency, and *Vesuvius*, *Stromboli*, and *Lipari* (see p. 19) are still in a state of activity.

3. **Plains**.—Although Italy is, generally speaking, *mountainous*, it includes several extensive and productive plains, also some flat and sterile regions, which are notoriously insalubrious. The chief plains are the

a. Plain of Lombardy, which extends from the Adriatic to the foot of the W. Alps, and from the Alps on the N. to the N. Apennines on the S. It is frequently called the "Garden of Europe," as being one of the best watered, most fertile, and beautiful districts on the continent. It is thickly populated.

b. Plain of Tuscany, or "*Maremma*," which is a low, uncultivated, inundated, uninhabited, and pestilential district, lying between the W. coast and the Tuscan Plateau.

c. Campagna of Rome, which is an undulating region, having Rome for its centre. It was formerly celebrated for its salubrious climate, but it is now notoriously malarious, and all but deserted.

d. Pontine Marshes, which consist of a district 24 m. long and 12 m. broad, lying S. of the Campagna and terminating near Cape Circello. The marshes are destitute of anything like a resident population, and present the bleakest and most melancholy aspect.

e. Campania, which is an extensive, flat, rich, well cultivated, and thickly inhabited district around Naples. Its fertility is probably not surpassed by that of any other spot in Europe.

DRAINAGE.—Italy, one of the most copiously watered of European countries, sends her drainage E. to the Adriatic, and W. to the Tyrrhenian Sea. The principal draining agents are the

1. **Rivers**, which flow

a. Eastwards, to the Adriatic—viz., the Adige, Po, Pescara, Sangro, Tirigno, and Ofanto.

b. Westward to the Tyrrhenian Sea—viz., the Arno, Ombrone, Tiber, Garigliano, and Volturno.

Obs. 1. The **Adige**, formed by the junction of the Etsch, and Eisack, has its sources among the ravines of the Rhaetian Alps. It flows S. and S.E., over a course of 280 m., into the Gulf of Venice. It passes the towns of Glurns, Botzen, Trent, Roveredo, Verona, and Legnano, and is, in a military point of view, the most important river in Italy.

Obs. 2. The **Po** rises in Monte Viso, flows E. over a course of 390 m., 280 of which are navigable, and falls into the Adriatic, through several mouths. It passes the towns Turin, Pavia, Piacenza, and Cremona. Its chief tributaries are the Dora, Ticino, Adda, Oglio, and Mincio, on the left bank; the Tanaro, Trebbia, Taro, and Panaro, on the right bank.

Obs. 3. The **Arno** rises on the W. slope of the Apennines, flows S. and N.W. and W. over a course of 75 m., waters one of the most fertile valleys in Italy, passes the towns Arezzo, Florence, and Pisa, and falls into the sea 7 m. W. of Pisa.

Obs. 4. The **Tiber** rises among the heights of the Tuscan Apennines, flows generally S. and S.W. over a course of 230 m., traverses the provinces of Tuscany, Umbria, and Rome, passes by Rome and enters the Tyrrhenian Sea by two mouths. Its chief tributaries are the Chiana, on the right bank; the Nera and Teverone, on the left bank.

2. **Lakes**, which are numerous and, in several instances, of indescribable beauty. They are not the largest, but they are the most celebrated col-

lections of fresh water in the world. They are distinguished by certain general features, being long, winding, embosomed in mountain scenery, and drained by rivers. The chief of them are as follows—

NAMES OF.	DRAINED BY THE	GENERAL REMARKS.
1. Maggiore ..	Ticino	{ The longest and most charming of the lakes ; contains the 4 beautiful Borromean islets.
2. Lugano	Tresa	
3. Come	Adda	{ Embosomed in lofty mountains and drained into Maggiore.
4. Iseo	Oglio	
5. Garda	Mincio	{ The most fascinating and sublime of lakes. Scenery very fine, but inferior to that of the other northern lakes. The largest Italian lake. Noted for the azure hue of its waters.

CLIMATE.—Though varying much in different latitudes and at different elevations of the surface, the climate of Italy is, as a rule, extremely pleasant. The mountains and the sea temper the heat of summer ; and the cold of winter becomes excessive only occasionally, and in the N. In Central Italy ice and snow are almost peculiar to the mountain summits, while in S. Italy they are unknown, and numbers of tropical plants flourish in the open air.

Obs. The **Sirocco**—a hot and stifling wind from Africa ; the **Tramontana**—a cold, dry, piercing wind from the Apennines ; and the insidious and deadly **Malaria**, which creeps up from the maritime plains and the shores of certain small inland lakes, are sad drawbacks to this otherwise radiant and joyous climate.

PRODUCTIONS.—The characteristic productions of Italy are rice, maize, wheat ; grapes, figs, olives, and oranges ; silk, and hemp ; marble, alabaster, and sulphur.

Obs. 1. The **Vine** flourishes everywhere in Italy, but the wines are inferior to those of Spain and France. The celebrated Italian Muscat wine, "*Lacryma Christi*," is made from grapes grown on the volcanic soil of Mount Vesuvius, and is, therefore, very limited in quantity. It is made both red and white.

Obs. 2. The **Olive** is extensively cultivated in the Etruscan and Neapolitan States. The best olive oil is that of Lucca.

PEOPLE AND LANGUAGES.—In 1876 the *People* of Italy numbered 27,769,475, the bulk of them being *Italians*—i.e., a mixed race of Latins, Ostrogoths, Longobards, and Normans. Italian is the *language* everywhere spoken, but there are marked differences of dialect in different parts.

Obs. In addition to Italians, there are some *German Colonists* in various parts of N. Italy, and a few *Albanians* and *Greeks* in Apulia. About 5 millions of the people speak German, Albanian, or Greek.

POLITICAL GEOGRAPHY.

POLITICAL DIVISIONS.—Italy, for administrative purposes, is divided into 16 *Compartments* ; and these are subdivided into 69 *Provinces*, which are named after the chief town in each. These compartments and provinces are given in the table below.

16 COMPARTMENTS.	69 PROVINCES AND TOWNS.
I. N. ITALY.—4 COMPARTMENTS, AND 22 PROVINCES.	
1. Piedmont	Alessandro, Cuneo, Novara, Turin.
2. Liguria	Genoa, Porto Maurizio.
3. Lombardia	{ Bergamo, Brescia, Como, Cremona, Mantua, Milan, Pavia, Sondrio.
4. Venice	{ Belluno, Padua, Rovigo, Treviso, Udine, Venice, Verona, Vicenza.
II. CENTRAL ITALY.—5 COMPARTMENTS, AND 22 PROVINCES.	
5. Emilia	{ Bologna, Ferrara, Forlì, Modena, Parma, Piacenza, Ravenna, Regio Emilia.
6. Umbria	Perugia.
7. Marches	Ancona, Ascoli, Piceno, Macerata, Pesaro, and Urbino.
8. Tuscany	{ Arezzo, Florence, Grosseto, Leghorn, Lucca, Massa and Carrara, Pisa, Siena.
9. Rome	Rome.
III. S. ITALY.—5 COMPARTMENTS, AND 16 PROVINCES.	
10. Abruzzi & Molise ..	Chieti, Teramo, Aquila, Campobasso.
11. Campania	Benevento, Naples, Salerno, Avellino, Caserta.
12. Puglia	Foggia, Bari, Lecce.
13. Basilicata	Potenza.
14. Calabria	Cosenza, Reggio, Catanzaro.
IV. ISLANDS.—2 COMPARTMENTS, AND 9 PROVINCES.	
15. Sicily	{ Caltanissetta, Catania, Girgenti, Messina, Palermo, Syracuse, Trapani.
16. Sardinia	Cagliari, Sassari.

NOTES ON THE TOWNS.—The eight most populous towns at the census of 1876 were, *Naples* (449,301), *Rome* (235,362), *Milan* (260,997), *Palermo* (228,483), *Turin* (213,937), *Florence* (169,588), *Genoa* (162,675), and *Venice* (126,239).

Obs. *Rome*, the capital of the kingdom of Italy, and the ecclesiastical metropolis of Roman Catholic Christendom, is situated on both banks of the Tiber, at about 18 m. from its mouth. It is one of the most remarkable cities in the world, being famous for its proud historical associations, for the number and magnificence of its monuments, for its precious antiquities, for its rich collections of objects of art, and for the number and beauty of its churches. St. Peter's is the largest and most magnificent church in the world, and the Vatican, the residence of the Pope, is one of the largest palaces in Europe. The manufactures of Rome include jewelry, articles of vertu, musical strings, &c., &c.

The chief ports are *Genoa*, *Leghorn*, *Naples*, on the W. coast; *Brindisi*, *Ancona*, *Venice*, on the E. coast; *Palermo*, *Trapani*, *Catania*, and *Messina*, in Sicily; and *Cagliari*, in Sardinia.

The principal industrial centres are *Naples* (macaroni, vermicelli, silk stuffs, and bijouterie), *Rome* (mosaics, jewelry, musical strings), *Venice* (cloth of gold and silver, velvets, silks, jewelry), *Florence* (silk, porcelain, straw hats, mosaics), *Milan* (silks, velvets, books, jewelry, cutlery), *Lucca* (olive oil), *Turin* (the chief entrepôt of the silk trade of N. Italy), *Bologna*, *Brescia*, *Alessandro* (silks, linens, woollens), and *Cremona* (violins).

Other places of note are *Lodi*, *Arcole*, *Marengo*, *Rivoli*, *Magenta*, and *Solferino*, famous battle-fields.

INDUSTRIES.—The bulk of the Italian people follow *Agricultural*

and *Pastoral pursuits*, being engaged chiefly in the production of corn, oil, wine, silk, fat cattle, and dairy stuff. The *Manufactures* comprise silk, cotton, and woollen fabrics; jewelry, glass, porcelain, straw hats, macaroni, and musical instruments.

Obs. The chief exports are silk, oil, spirits, corn, and sulphur; imports, tea, coffee, sugar, cotton and woollen goods, coals, iron, and hardware.

COMMUNICATIONS.—In Lombardy, and in N. Italy generally, the *Turnpike Roads* are very good; but in S. Italy they are insufficient and deplorably bad. There are numerous *Canals*, but they are not of much commercial value; about 4,888 m. of *Railway*; and nearly 17,000 m. of *Telegraphic Lines*. Railway-tunnels through the Alps connect Italy with France and Switzerland.

GOVERNMENT, RELIGION, AND EDUCATION.—The *Government* of Italy is a constitutional Monarchy, and the *Religion* of the great mass of the people Roman Catholicism. The *higher Education* of the people is well provided for by the 22 Universities which Italy possesses; but *elementary Education* is still at a low ebb.

THE REPUBLIC OF SAN MARINO.—One of the smallest and oldest states in Europe lies on the N. border of the compartment *Marches*, and is enclosed completely by Italian territory. Its *area* is 24 sq. m., its *pop.* 7816. The place owes its origin to St. Marinus, who in the fifth century settled himself there.

SWITZERLAND.

PHYSICAL GEOGRAPHY.

Latitude. Between 45° 50' and 47° 50' N. *Longitude.* Between 5° 58' and 10° 30' E.
Area. 15,976 sq. m.

POSITION AND BOUNDARIES.—Switzerland lies near the middle of Central Europe. It is bounded on the

N. by Germany. E. by Austria. S. by Italy. S.W., W., and N.W. by France.

Obs. Switzerland possesses no seaboard.

SURFACE.—Except in the N. and N.W., Switzerland is everywhere mountainous. No other part of Europe is so elevated as this, and none so diversified in character. The chief surface features are

1. **Mountains**, the chief of which lie in the centre and S. of the country, and belong to the Alpine system, radiating from the huge knot which forms the St. Gothard region. They are

a. The *Pennine* or *Valais Alps*, which trend S.W., on the S. side of the Rhone, extending from Mt. St. Gothard to the Col de la Seigne, S. of Mt. Blanc, a distance of 100 m. Forming the most elevated portion of the whole Alpine system, they culminate in *Mt. Blanc* (France), and embrace the gigantic masses of *Monte Rosa* (15,217 ft.), the highest point in Switzerland,

the *Dom* (14,951 ft.), the *Matterhorn* or *Mt. Cervin* (14,750 ft.), and numerous other summits clad with perpetual snow.

Obs. Upwards of 80 *Passes* cross this formidable barrier, the most important being the *Great St. Bernard* and the *Simplon*.

b. The *Bernese Alps*, which run S.W. on the N. of the *Rhône*, from *Mt. St. Gothard* to the shores of *Lake Lemán*. The countless ramifications of the system form the "*Bernese Oberland*," the most varied and picturesque region in Europe. The *Finster Aarhorn* (14,026 ft.) is their highest point; but they embrace also the massive *Jungfrau* (13,671 ft.), and many other almost equally famous summits.

Obs. The chief *Passes* of this system are the *Gemmi* and the *Grimsel*.

c. The *Lepontine Alps*, which extend E. by S. from *Mt. St. Gothard* to the *Piz Bernina*, on the S.E. frontier of Switzerland, a distance of about 100 m. This section of the Alps embraces the *Ticino*, *Adula*, and *Bernina* groups, and culminates in the *Piz Bernina* (13,294 ft.). It also includes among its many remarkable points the *Piz Valrhein* or *Adula* (11,148 ft.), and *Camotsch* (10,833 ft.).

Obs. Of the numerous *Passes* by which these mountains are traversed, those of *St. Gothard*,¹ *Bernardino*, and *Splügen* are the most celebrated.

d. The *Alps of the four Forest Cantons*,² which spread to the N. and N.W. of *Mt. St. Gothard* and occupy the region between the upper courses of the rivers *Aar*, and *Reuss*. The *Galenstock* (11,956 ft.) is their chief summit, but the *Sustenhorn*, and the *Thierberg* in the same vicinity, are not much inferior in height.

Obs. The chief *Passes* among these mountains are the *Brunig*, and the *Susten*.

e. The *Swiss Alps* or *Tödi Range*, which project from *Mt. St. Gothard* towards the N.E., and occupy the region between the upper courses of the rivers *Reuss*, and *Rhine*. They culminate in *Mt. Tödi* (11,887 ft.).

Obs. 1. Both these, and the Alps of the Forest Cantons, are detachments of the Lepontine section of the great mountain barrier.

Obs. 2. Along the N.W. frontier runs the long chain of the *Jura Mountains*.

2. Plains, of which the chief is the

Plain of Switzerland, which stretches from the shores of *Lake Geneva* in the S.W. to those of *Lake Constance* in the N.E., a distance of 135 m. In its widest parts it is 50 m. broad. Its surface is mostly undulating, but in places it is even hilly.

3. Valleys, which are most interesting and important features in the surface of Switzerland. The chief of them are the

a. *Valley of the Upper Rhône*, which lies between the *Valais* and *Bernese Alps* and extends from *Mt. St. Gothard* to the *Lake of Geneva*, a distance of nearly 100 m., and includes the lesser vales of *Visp*, *Leuk*, etc.

b. *Valley of the Upper Rhine*, which extends from *Mt. St. Gothard* N.E. and N., to *Lake Constance*, a distance of about 90 m., and includes the celebrated gorges of the *Via Mala*,³ and *Pfeffers*.

c. *Engadine* or *Valley of the Upper Inn*, which lies between the *Bernina* and *Albula Alps* and stretches N.E. from the *Septimer Pass* to the *Tyrol*, a distance of 60 m. It includes about 20 tributary valleys and is one of the most elevated depressions among the Alps.

DRAINAGE.—Switzerland sends her copious waters N.W., towards the North Sea, and S.W., S.E., and E., towards the Mediterranean,

¹ The *St. Gothard* mass is now pierced by a railway-tunnel (1890).

² The four Cantons are *Uri*, *Schwytz*, *Unterwalden*, and *Lucerne*.

³ The *Via Mala* is probably the grandest ravine in Switzerland. It leads to the *Splügen* and *Bernardino* passes, between the villages of *Thausis* and *Splügen*.

Adriatic, and Black Seas respectively. The chief draining agents are the

1. **Rivers**, which belong to the basin of the
 - a. *North Sea*, viz., the Rhine, and Aar.
 - b. *Mediterranean*, viz., the Rhône.
 - c. *Adriatic*, viz., the Ticino.
 - d. *Black Sea*, viz., the Inn.

Obs. 1. The **Rhine**, (see p. 20, *obs. 3*). It is only that upper course of the Rhine which lies S.W. of its junction with the Ill that belongs exclusively to Switzerland; while, on the other hand, by far the greater part of Switzerland belongs to the valley of the Rhine.

Obs. 3. The **Aar** is the principal river of Switzerland. It rises in the Aar Glacier on the Grimsel Pass, and drains the whole country from the Bernese Alps to the Rhine, and from the Jura to the Glatt. It flows to the N.W. and N.E., over a course of 170 m., and falls into the Rhine midway between Lake Constance and Basle. It traverses the lakes Brienz, and Thun. It receives, on its left bank, the *tributaries* Sarine, and Zihl, which bring with them the waters of Lakes Neuchâtel, and Bienne; on its right bank, the Emmen, Suhr, Reuss, and Limmat, which drain nearly all the other lakes. The Aar is navigable from lake Thun to the Rhine.

Obs. 3. The **Rhône** (p. 20, *obs. 4*), only that portion of the Upper Rhône which lies between the Valais and Bernese Alps, belongs exclusively to Switzerland. Its chief Swiss *tributaries* are the Visp, Borgne, and Dranse, which it receives on its left bank.

Obs. 4. The **Ticino** has only its upper course in Switzerland. Rising among the S. defiles of St. Gothard and flowing E., S.E., and S.W., it falls into the N.E. corner of Lake Maggiore. When it issues thence it is an Italian stream, a tributary of the Po. Its chief Swiss *tributary* is the Moesa, which it receives on its left bank, near Bellinzona.

Obs. 5. The **Inn** rises in lake Lugni, at the extremity of the Upper Engadine, flows N.E. into Austria, traverses the Tyrol, and after a course of 820 m., only about 50 m. of which are in Switzerland, falls into the Danube at Passau.

2. **Lakes**, which in Switzerland not only serve as draining agents, but also add to the grand and interesting scenery of this country one of its chief and most attractive charms. The best known and most important of them are those in

- a. E. Switzerland, viz., *Constance, Wallensee, Zurich, Lucerne, and Zug.*
- b. W. Switzerland, viz., *Brienz, Thun, Neuchâtel, Bienne, and Geneva.*

Obs. 1. The **Lake of Constance** lies between Switzerland, Germany, and Austria, and is 40 m. long, and 10 m. wide. Towards its N.W. extremity it divides into two arms, which are called the "Lower Lake" and the "Lake of Überlingen." This and the three following lakes are navigated by a large fleet of steamboats.

Obs. 2. **Lake of Zurich** is famous for its picturesque scenery. It is 34 m. long, and 2½ broad in its widest parts. Its shores are undulating, thickly peopled, and richly cultivated. Zurich stands at the N. end of the lake.

Obs. 3. **Lake Lucerne**, is the most irregular shaped, but also, perhaps, the most beautiful, lake in Switzerland. Its scenery is generally grand, but it is especially so at the S. end. It is 24 m. long, and from ½ a mile to 2 m. broad. The town of Lucerne stands on the W. bank, near the centre of the lake.

Obs. 4. **Lake of Geneva or Lake Leman**, the largest of the Swiss lakes, lies between Switzerland, France, and Geneva. It is crescent-shaped, having its extremities turned towards the S.E. and S. respectively. The N. shore is 56 m. long, and the S. 44 m.; it is about 8 m. broad in its widest part, and 1,200 ft. deep. The town of Geneva stands at its S.W. corner.

3. **Glaciers**.—It is estimated that the tops and sides and valleys of the Alps include no less than 1,177 sq. m. of snow, névé, and ice surface; and as many as 1,100 distinct glaciers. Of this enormous frozen mass a large proportion is in Switzerland, and belongs chiefly to the Valais, Bernese, and Bernina Alps. The great Swiss ice-centres of these ranges are respectively *Monte Rosa*, the *Finsteraarhorn*, and the *Bernina Piz*.

Obs. The chief glaciers flowing from the

1. *Monte Rosa* Centre, are the *Grœner*, *Ferpècle*, *Zinal*, and *Findelen*.
2. *Finsteraarhorn* Centre, are the *Aletsch*, *Viesch*, *Unteraar*, and *Tschingel*.
3. *Bernina* Centre, are the *Mortiratch*, and *Forno*.

CLIMATE.—Owing to its great elevation above the level of the sea, its inland position, and its countless snow clad summits, the climate of Switzerland, generally, is more rigorous than that of less mountainous countries in the same latitudes. At the same time it is characterised by infinite variety, from the eternal Arctic severity which reigns in the high Alps, to the genial and sunny temperateness of the low sheltered valleys which matures maize, vines, figs, olives, and tobacco. Its *mean annual temperature* is 4° Fahr. lower than that of England.

PRODUCTIONS.—The most characteristic *Productions* of Switzerland are the chamois, marmot, and St. Bernard spaniels; pine-timber, and Alpine plants—gentians, rhododendrons, saxifrages, lichens, mosses, &c.

Obs. The *ibex*, *bear*, *lynx*, and *stein-böck* are not yet extinct; and the *golden eagle*, and *bearded vulture* are still sometimes seen.

PEOPLE AND LANGUAGE.—In 1877 the *People* numbered 2,776,035, and consisted chiefly of Swiss, who are Teutons of the High German stock, of French, and Italians. German is the *Language* of the majority of the inhabitants in sixteen cantons, French in four, and *Italian* in two.

POLITICAL GEOGRAPHY.

POLITICAL DIVISIONS.—The Republic of Switzerland consists of a United Confederacy of 25 *Cantons*. These with their capitals are given in the following table:—

CANTONS.	CAPITALS.	CANTONS.	CAPITALS.
I. 12 CANTONS IN E. SWITZERLAND.		II. 13 CANTONS IN W. SWITZERLAND.	
1. Schaffhausen.	Schaffhausen.	13. Aargau (Argovie).....	Aarau.
2. Thurgau.....	Constance.	14. Lucerne.....	Lucerne.
3. Zürich.	Zürich.	15. Soleure (Solothurn)	Soleure.
4. St. Gall.	St. Gall.	16. Basle, Town.....	Basle.
5. Appenzell, Exterior	Herisau.	17. Basle, Country.....	Liestal.
6. Appenzell, Interior	Appenzell.	18. Bern.....	Bern.
7. Zug.....	Zug.	19. Unterwalden, Upper ..	Sarnen.
8. Schwyz.....	Schwyz.	20. Unterwalden, Lower ..	Stanz.
9. Glarus.	Glarus.	21. Valais (Wallis).....	Sion (or Sitten).
10. Uri.....	Altdorf.	22. Vaud (Waadt).....	Lausanne.
11. Grisons (Graubünden) ..	Coire (Chur).	23. Geneva (Genf).....	Geneva.
12. Tessin (Ticino).....	Luigano.	24. Friburg.....	Friburg.
		25. Neuchâtel (Neuenburg).	Neuchâtel.

NOTES ON THE TOWNS.—The five most populous towns are *Geneva* (46,783), *Zurich* (21,199), *Basle* (44,834), *Bern* (36,000), *Lausanne* (26,520).

Obs. Bern, the federal capital of Switzerland, is surrounded by the Aar, on three sides. It is the seat of the federal government and the residence of the representatives of foreign powers. It possesses an arsenal, a mint, an observatory, a botanical garden, a rich library, a museum, and many schools and other educational institutions; a Hotel de Ville, a new federal palace, and a cathedral, which is famous for its stained glass windows, its sculptures, and its grand organ. It is also an important manufacturing centre.

The chief **Industrial Centres** are *Geneva* (horlogerie, jewelry, cutlery, musical instruments, &c.), *Bern* (firearms, leather, paper, mathematical instruments, &c.), *Basle* (silk ribands, cotton stuffs, gloves, &c.), *Zurich* (silk and cotton fabrics, and machinery), *Friburg*, *St. Gall*, and *Lausanne*. Other notable places are *Lucerne*, *Interlaken*, *Thun*, and *Brienz*, famous for the natural beauties of their situations; *Pfeffers*, *Leuk*, and *St. Moritz*, celebrated watering-places; *Grindelwald*, and *Zermatt*, renowned for their glacier and mountain scenery; *Morgarten*, *Sempach*, *Näfels*, and *Laupen*, battle-fields, the scenes of Swiss victories over the Austrians, at various times, between 1315 and 1399.

INDUSTRIES.—The characteristic industries of Switzerland are *Grazing*, *Agriculture*, and the *Manufacture* of watches, clocks, silk ribands, and silk and cotton stuffs.

Obs. The commerce consists mainly of a *transit trade* with France, Germany, Austria, and Italy.

COMMUNICATIONS.—Switzerland possesses a complete system of *High-Roads*, about 1,470 m. of *Railway*, and 10,000 m. of *Telegraph wires*; also, most of the great lakes are traversed by *Steamers*.

GOVERNMENT, RELIGION, AND EDUCATION.—The *Government* is a *United Confederacy*, the executive and legislative power being vested in Parliament, which consists of a State Council, and a National Council. About 60 per cent. of the people belong to the Calvinistic Church, and the remainder are Roman Catholics, or Jews. *Education* is compulsory and the children of the poor are educated at the expense of the State.

THE GERMAN EMPIRE.

PHYSICAL GEOGRAPHY.

Latitude. Between 47° 10' and 55° 40' N. *Longitude.* Between 5° 50' and 23° E.
Area. 208,368 sq. m. (exclusive of area of lakes).

POSITION AND BOUNDARIES.—Germany lies in the W. of Central Europe. It is bounded on the N. by the North Sea, Denmark, the Baltic, and Russia. E. by Russia and Austria. S. by Austria and Switzerland. W. by France, Belgium, and Holland.

COASTS.—The coast-line of Germany is all on her N. border and skirts the North Sea and the Baltic. The North Sea coast is so low that it has in many places to be protected by dykes. The chief coast features are the

Capes, Arcona N.E. of Rügen Island, Rixhöft Head, and Brüter Head, at the W. and E. extremities of the Gulf of Danzig.

Inlets, Jahde, the estuaries of the Weser, and Elbe, belonging to the North Sea; Kiel Bay, the Gulf of Lubeck, and Gulf of Danzig, in the Baltic.

ISLANDS.—The chief islands off the German coasts are *Rügen*, *Femern*, and *Alsen* in the Baltic; the *N. Frisian Islands*, and *Heligoland* in the North Sea.

Obs. 1. *Heligoland*, though geographically belonging to Germany, has been politically a possession of Great Britain since A.D. 1814. The island is only about 4,000 yards in circumference, and is being slowly diminished by the action of the sea. Its inhabitants are Frisians who follow seafaring pursuits.

SURFACE.—North Germany is flat and but slightly elevated above the level of the sea. The W., Central, and S. districts are mountainous, or hilly, and form an extensive table-land of from 1,500 to 2,000 ft. high. The chief surface features are the

1. **Mountains**, of which there are two principal systems, viz.

a. The *Bavarian Alps*, which cover the greater part of the S. frontiers of the empire, and have their highest point in *Zugspitz* (9,716 ft.), at the source of the river Iser.

b. A sinuous chain, or rather an irregular succession of wooded heights of moderate elevation, which runs from the valley of the Rhine on the W. to the E. frontiers of the realm, holding a course about midway between the N. shores and the Alps, and separating the maritime basin of the North and Baltic Seas from the inner basin of the Danube. The chain is not designated by any general appellation, but is marked by various names in the various localities through which it runs. Its chief links are

a. On the W., *Taunus*, *Vogelsberg*, *Rhöngebirge*,¹ *Thuringer Wald*,¹ and *Fichtelgebirge*.

b. On the E., the *Erzgebirge*, *Riesengebirge* or *Giant Mountains*, and the *Sudetes*, which all lie on the S.E. frontier between the German and Austrian Empires.

c. The *Böhmer Wald* or *Bohemian Mountains*, which run from the *Fichtelgebirge* towards the S.E., between Germany and Bohemia, and form the water-parting between the Valleys of the Elbe and Danube.

d. The *Franconian Jura* and the *Swabian Jura*, parts of a range running S.W. from the *Fichtelgebirge* to the sources of the Danube.

e. The *Schwarz Wald*, or Mountains of the Black Forest, which run N. and S. from the W. extremity of the Swabian Jura, and which also form the connecting link between the great Alpine barrier and the Mountains of the Centre.

2. The **Plateaux**, of which the chief one is

The *Bavarian Tableland*, which occupies the region between the central range and the Alps, and runs from the *Böhmer Wald* to the *Schwarz Wald*. It has a general elevation of from 1,000 to 1,300 ft., and is traversed from W. to E. by the Danube.

3. The **Plains**, the most important being

The *German Plain*, which lies between the central mountains and the sea on the N. It is a low, dreary, and monotonous region in which tracts of heather, great sandy wastes, marshes, and bogs alternate with extensive and valuable pastures, in which vast herds of cattle are reared and fed. Berlin, the metropolis of the empire, is situated on this plain.

¹ The term *Gebirge* (= Mountain), and *Wald* (= Forest), are often used synonymously in all German countries.

DRAINAGE.—The copious drainage of the German Empire is carried down a N.W. slope into the Baltic Sea, and German Ocean, respectively ; and down a S.E. slope to the Black Sea. The chief drainage agents are the

1. **Rivers**, which flow down the

a. *N. Western Slope*, into the North Sea, viz, the Rhine, Ems, Weser, and Elbe.

b. *N. Western Slope*, into the Baltic, viz., the Oder, Vistula, and Niemen.

c. *S. Eastern Slope*, into the Black Sea, viz., the Danube.

Obs. 1. The Rhine (see pp. 20, 63, 85), from Basle to Cleves, belongs entirely to Germany. This portion is about 370 m. long, and includes the "middle" and part of the "lower" Rhine, and most of the picturesque and romantic scenery for which the banks of that river are celebrated. Its German *tributaries* are the Neckar, Main, Lahn, and Ruhr, on the right bank ; and the Moselle, on the left bank. The Rhine passes the towns of Strasburg, Mannheim, Mainz, Bingen, Coblenz, Bonn, Cologne, &c.

Obs. 2. The Weser is formed by the junction of the Werra, and Fulda, and rises in the Thuringian Forest, and the Rhöngebirge. It flows, generally, N., and after a course of 250 m. falls into the North Sea. Its chief *tributary* is the Aller, which it receives on its right bank.

Obs. 3. Elbe. See p. 20.

Obs. 4. The Oder rises in the Sudetes, and flows with a general N.W. and W. course of 553 m. into the Baltic. It forms numerous extensive marshes in the upper portion of its middle course, and in several parts requires dyking. Its principal *tributaries* are the Bartsch, and Warta on the right bank ; and the Bober, and Neisse on the left bank.

Obs. 5. Vistula. See p. 20.

Obs. 6. Niemen or Memel, which belongs chiefly to Russia. See p. 118.

Obs. 7. The Danube (see p. 21), before leaving Germany, receives the *tributaries* Iller, Lech, Isar, and Inn, on the right bank ; and the Altmühl, and Nab on the left bank.

2. **Lakes.** Germany possesses many *Lakes* ; but none of them are of any great size or beauty. The chief are the *Chiem See*, *Würm See*, and *Ammer See*, which are all in Bavaria.

CLIMATE.—The climate of Germany is healthy and bracing. It varies, however, with the aspect of the country. The low plains of the N. are cold, and subject to long winters ; the uplands enjoy an equable and genial temperature and a dry atmosphere ; while extremes of cold and heat prevail on the mountains and in the valleys respectively.

PRODUCTIONS.—These are of the same character, generally, as those of the other countries of Central Europe. Those, however, which are most characteristic of the country are wool, wines, zinc, salt, amber, and medicinal waters.

Obs. The wines of the Rhine, Moselle, and Saxony are famous. **Amber**, the most remarkable of the German productions, has the chief source of its supply on the Baltic coasts of Prussia.

PEOPLE AND LANGUAGE.—At the Census of 1875 the *Population* numbered 42,727,360, of whom nearly 38 millions are Germans, and 2½ millions, Poles. The *Language* of the people and of literature is German.

Obs. The non-German peoples—the *Poles*, *Lithuanians*, *Wends*, *Danes*, *Wal-loons*, &c.—speak also their own languages among themselves.

POLITICAL GEOGRAPHY.

THE grand confederation termed "The German Empire" is composed of 25 "States" and 1 "Reichsland."¹ The "States" comprise 4 Kingdoms, 6 Grand Duchies, 5 Duchies, 7 Principalities, and 3 Free Towns. These, with their capitals, are given in the table :—

GERMAN STATES.			
STATES.	CAPITALS.	STATES.	CAPITALS.
I. FOUR KINGDOMS.		IV. SEVEN PRINCIPALITIES.	
1. Prussia	BERLIN.	16. Waldeck	Arolsen.
2. Bavaria	Munich.	17. Lippe-Deinold	Detmold.
3. Württemberg	Stuttgart.	18. Schwarzburg- Rudolstadt	Rudolstadt.
4. Saxony	Dresden.	19. Schwarzburg- Sondershausen ..	Sondershausen.
II. SIX GRAND DUCHIES.		20. Reuss-Schleiz	Gera.
5. Baden	Carlsruhe.	21. Schaumburg-Lippe ..	Bückeburg.
6. Mecklenburg- Schwerin	Schwerin.	22. Reuss-Greiz	Greiz.
7. Hesse	Darmstadt.	V. THREE FREE TOWNS.	
8. Oldenburg	Oldenburg.	23. Hamburg	
9. Saxe-Weimar	Weimar.	24. Lubeck	
10. Mecklenburg- Strelitz	New Strelitz.	25. Bremen	
III. FIVE DUCHIES.		VI. REICHSLAND.	
11. Brunswick	Brunswick.	26. Alsace-Lorraine ..	Strasburg.
12. Saxe-Meiningen	Meiningen.		Colmar,
13. Anhalt	Dessau.		Metz.
14. Saxe-Coburg Gotha ..	Gotha & Coburg.		
15. Saxe-Altenburg	Altenburg.		

Obs. The Kingdoms, and the Grand Duchy of Baden are described separately in the following pages.

GOVERNMENT, RELIGION, AND EDUCATION.—The sovereign power of this great confederation is exercised by the *Emperor*, the *Federal Council*, (consisting of 59 members who represent the States of the Empire), and the *Federal Diet* (consisting of 397 members who are popularly elected). About three-fifths of the people are *Protestants* of the Lutheran and Calvinistic persuasions; the rest are *Roman Catholics*. *Education* is general and compulsory throughout the Empire.

PRUSSIA.

GENERAL FACTS OF PHYSICAL GEOGRAPHY.

Latitude. Between 49° and 55° 30' N. Longitude. Between 6° and 23° E.
Area. 184,138 sq. m.

POSITION AND BOUNDARIES.—Prussia lies in the N.W. of Central Europe. It is bounded on the

N. by the North Sea, Denmark, the Baltic, and Russia. E. by Russia. S. by

¹ Reichsland = "Imperial territory or district."

Austria, Saxony, and several small German States. W. by France, Belgium, and Holland.

COASTS.—Nearly all the German sea-board belongs to Prussia. (See p. 87).

ISLANDS.—Almost all the *insular* portion of Germany is Prussian. (See p. 88).

SURFACE—The vast bulk of Prussia belongs to the “great German Plain”; but *mountains* and *highlands* form the characteristic features of the S.W. portion, the *Harz*, *Teutoburger Wald*, *Taunus*, *Hunsrück*, *Eifel*, and other ranges, all lying in this section of Prussia.

DRAINAGE.—Nearly all the important *Rivers* of Germany are Prussian. (See p. 89).

CLIMATE.—The *climate* is, generally, cold; and on the Baltic coast moist and disagreeable.

PRODUCTIONS.—The chief of these are grain, fat cattle, dairy-produce, wines, and timber; coal, sulphur, alum, salt, amber, pipe-clay, Fuller’s earth, &c.

PEOPLE AND LANGUAGE.—In 1875 the *Population* was 25,742,404, of whom 88 p. c. were Germans. The *Language* is German.

POLITICAL GEOGRAPHY.

POLITICAL DIVISIONS.—For administrative purposes Prussia is divided into 13 *Provinces*, which, with their chief towns, are as follows:—

PROVINCES.	CAPITALS.	PROVINCES.	CAPITALS.
1. East Prussia	Königsberg.	8. Schleswig-Holstein.	Altona.
2. West Prussia	Danzig.	9. Hanover	Hanover.
3. Brandenburg	Berlin.	10. Westphalia	Münster.
4. Pomerania	Stettin.	11. Hesse-Nassau	Frankfort.
5. Posen	Posen.	12. Rhine-land	Cologne.
6. Silesia	Breslau.	13. Hohen-Zollern (Prin-	} Sigmaringen.
7. Saxony	Magdeburg.	cipality of)	

NOTES ON THE TOWNS.—The six most populous towns of Prussia are *Berlin* (966,358), *Breslau* (239,050), *Cologne* (135,371), *Königsberg* (122,636), *Hanover* (106,677), *Frankfort* (103,136), *Danzig* (97,931).

Obs. *Berlin*, on the Spree, near the centre of the kingdom, is the capital of Prussia and the metropolis of the German Empire. It is one of the largest and handsomest cities in Europe. It is the intellectual centre of Germany, and is celebrated for its numerous and admirably appointed Educational Institutions. Its University is of great reputation. Berlin is also the chief manufacturing city of Germany. All the principal roads of Prussia, several canals, and seven great railways meet in Berlin. It is the seat of Government and of the Representative Chambers.

The chief *naval ports* are *Kiel*, *Stralsund*, *Danzig*, and *Wilhelmshaven*, all of which are on the Baltic coast.

The principal *commercial ports* are *Stettin*, *Danzig*, *Königsberg*, *Altona*, *Memel*, and *Elbing*.

The chief industrial centres are *Berlin* (china, linens, woollens, silks, iron-ware, &c.), *Breslau* (linen, woollen, cotton, and silk fabrics, and much commerce), *Cologne* (eau-de-Cologne, woollens, cottons, silks, &c.), *Frankfort* (banking and commerce), *Essen* (firearms, steel cannon — Krupp's, steam-engines, &c.), *Elberfeld*, *Crefeld*, *Posen*, *Bromberg*, and *Lissa*.

Other notable towns are *Bonn*, *Halle*, *Göttingen*, *Marburg*, University towns; *Potsdam*, a Royal residential town; *Treves*, the oldest town in Germany; *Aix-la-Chapelle*, *Ems*, *Homburg*, *Wiesbaden*, and *Selters*, famous watering places.

INDUSTRIES.—These are *Agriculture*, which employs about half the population; *Manufactures*, of which the chief are woollen, linen, cotton, and silk fabrics; iron-founding, cannon-making, printing apparatus, brewing, &c.; *Mining*, especially coal, iron, zinc, lead, and salt; and *Commerce*.

Obs. The chief *Exports* are timber, corn, wool, flax, and oil; *Imports*, colonial produce, coal, iron, raw silks, and cottons.

COMMUNICATIONS are well developed, and include excellent systems of *Macadamised Roads*, *Railroads*, *Canals*, *Navigable Rivers*, and *Telegraph Lines*.

GOVERNMENT, RELIGION, AND EDUCATION.—The *Government* is a constitutional and hereditary Monarchy. The *Religion* is Protestant, and Roman Catholic. *Education* is general and compulsory, and is under the control of Government. There are eleven different grades of schools.

BAVARIA.

GENERAL FACTS OF PHYSICAL GEOGRAPHY.

Obs. *Bavaria* consists of two detached parts, viz., *Bavaria Proper* on the E., and *Rhenish Bavaria* on the W. of the Rhine. Between them lie parts of *Baden* and the *Grand Duchy of Hesse*.

I. BAVARIA PROPER.

Latitude. Between 47° 20' and 50° 41' N. *Longitude.* Between 9° and 13° 48' E.
Area. 26,992 sq. m.

POSITION AND BOUNDARIES.—*Bavaria Proper* lies near the middle of Central Europe. It is bounded on the

N. by *Saxony*, *Hesse*, and *Baden*. E. and S. by *Austria*. W. by *Württemberg*, *Baden*, and *Hesse Darmstadt*.

SURFACE.—In general the aspect of *Bavaria* is that of a mountainous plateau. The *Danube*, which cuts it into two nearly equal parts, divides the country into two natural regions, which are remarkably distinct in character. The N. region is mountainous, or decidedly undulating; while the S. forms the elevated highland of *Bavaria*. The chief mountains are the *Bavarian Alps*, along the S. frontier; the *Böhmer Wald* on the E. frontier; the *Fichtelgebirge*, and the *Franken Wald* in the N. E. (see p. 88).

DRAINAGE.—The drainage of Bavaria is carried to the Black Sea by the *Danube* (see pp. 21, 89), and towards the North Sea by the *Main*, a tributary of the Rhine. Other Bavarian rivers are the *Iller*, *Lech*, *Isar*, and *Inn*, tributaries of the Danube. *Lake Constance* is partly in Bavaria; and other lakes are *Chiem*, *Würm*, and *Ammer*.

CLIMATE.—The *climate* is generally temperate and salubrious.

PRODUCTIONS.—These include corn, cattle, and grapes; salt, coal, iron, marbles, lithographic stone, and clay.

PEOPLE AND LANGUAGE.—In 1875 the *Population* was 4,381,136, most of whom are *Germans*, speaking the *German Language*.

II. RHENISH BAVARIA.

Latitude. Between 48° 57' and 49° 50' N. *Longitude.* Between 7° 5' and 8° 27' E.
Area. 2,291 sq. m.

POSITION AND BOUNDARIES.—This part of the kingdom lies W. of the Rhine, and is bounded on the

N.W. and N. by the Rhine Province. N.E. by Hesse Darmstadt. E. by Baden. S. by Alsace. S.W. by Lorraine.

SURFACE.—The general aspect of the country is hilly. The *Hardt*, with peak *Donnersberg*, (2,300 ft.), are the chief mountains.

DRAINAGE.—Small streams carry the drainage of this part of the State to the Rhine.

CLIMATE AND PRODUCTIONS are similar to the climate and productions of Bavaria Proper.

PEOPLE, AND LANGUAGE.—In 1875 the *population* was 641,254, who are mostly *Germans*, who speak the *German language*.

POLITICAL GEOGRAPHY.

POLITICAL DIVISIONS.—For administrative purposes Bavaria is divided into 8 *Government Districts*, which, with their chief towns, are as follows:—

DISTRICTS.	CAPITALS.	DISTRICTS.	CAPITALS.
1. Upper Bavaria.....	Munich.	5. Upper Franconia....	Baireuth.
2. Lower Bavaria.....	Landshut.	6. Middle Franconia ..	Ansbach.
3. Palatinate (Rhenish Prussia).....	Spires.	7. Lower Franconia....	Würzburg.
4. Upper Palatinate ..	Ratisbon.	8. Swabia	Augsburg.

NOTES ON THE TOWNS.—The five most populous towns are *Munich* (198,829), *Nuremberg* (91,018), *Augsburg* (57,213), *Würzburg* (44,975), *Ratisbon* (31,504).

Obs. Munich, on the Isar, and at the head of railways to Vienna, Italy, Switzerland, and France, is the capital of the kingdom, and one of the most elevated cities in Europe. It is the seat of a university, is famous for its rich treasures of art, and contains the largest theatre in Germany.

The chief industrial centres are *Munich* (mathematical instruments, bronze and iron wares, silk, beer, &c.), *Nuremberg* (toys, wooden clocks, &c.), *Augsburg* (commerce, banking, silks, cottons, linens, mathematical instruments, &c.), *Baireuth*, *Hof*, *Furth*, *Landshut*, &c.

Other notable towns are *Würzburg* (for its University), *Erlangen* (the seat of the only German Protestant University), *Ratisbon* (formerly the capital of the kingdom), *Spire* (for ecclesiastical and historical associations), *Passau*, *Ingoldstadt*, and *Landau* (military strongholds).

INDUSTRIES.—The principal sources of Bavarian wealth are *Agriculture*, and *Mining*: *Manufactures* are chiefly represented by beer, wine, cotton, linen and woollen fabrics, toys, mathematical and musical instruments.

COMMUNICATIONS.—*High roads* are, generally, very bad; but *Railways* connect all the important districts and towns. There are also numerous important *Canals*; and *Telegraphic Communications* are largely developed.

GOVERNMENT, RELIGION, AND EDUCATION.—Bavaria is a constitutional and hereditary Monarchy. The bulk of the people (71 p. c.) are *Romanists*; the remainder are *Protestants*. *Education* is general and compulsory.

WÜRTTEMBERG.

GENERAL FACTS OF PHYSICAL GEOGRAPHY.

Latitude. Between 47° 35' and 49° 35' N. *Longitude.* Between 8° 15' and 10° 30' E.
Area. 7,530 sq. m.

POSITION AND BOUNDARIES.—Württemberg forms one of the S.W. states of Germany. It is bounded on the

N., E., and S.E. by Bavaria. S. by Lake Constance. S.W., W., and N.W. by Baden.

SURFACE.—The general aspect of the country is mountainous, except in the S. The chief *mountain range* is the Rauhe Alp or Swabian Jura, which embraces several summits of more than 3,000 ft. high, and separates the basins of the Neckar, and Danube.

DRAINAGE.—The chief *rivers* are the Danube, and Neckar. The Neckar with its tributaries drains by far the largest part of the kingdom. The *lakes* are small and unimportant, and lie principally in the S.; but they include a part of Lake Constance.

CLIMATE AND PRODUCTIONS.—The *climate* is variable, but temperate and salubrious. The chief *productions* are corn, wine, potatoes, fruit; timber, coal, iron, salt, and building-stone.

PEOPLE AND LANGUAGE.—In 1875 the *population* was 1,881,505,

nearly all of whom are *Germans*, speaking the *German language*, or some of its dialects.

POLITICAL GEOGRAPHY.

POLITICAL DIVISIONS.—Württemberg, for administrative purposes, is divided into 4 *Circles*, which with their capitals are as follows.

CIRCLES.	CAPITALS.	CIRCLES.	CAPITALS.
1. Jaxt	<i>Ellwangen.</i>	3. Black Forest ..	<i>Reutlingen.</i>
2. Neckar	<i>Stuttgart.</i>	4. Danube	<i>Ulm.</i>

NOTES ON THE TOWNS.—The four most populous towns are *Stuttgart* (107,273), *Ulm* (30,222), *Heilbronn* (21,208), and *Esslingen* (19,602).

Obs. Stuttgart, the capital of Württemberg, is prettily situated on a small tributary of the Neckar, and at the head of railways to Ulm, Wildbad, Heilbronn, Carlsruhe, &c. It is a well built town, containing a royal palace and some handsome public buildings. Its library is said to contain the largest collection of bibles in the world. It is the centre of a large printing and book-binding trade.

The chief industrial centres are *Stuttgart* (printing, woollens, cottons, mathematical instruments), *Ulm*, *Heilbronn*, *Ludwigsburg*, *Esslingen*, *Biberach* (toys), and *Aalen* (salt works).

Other notable towns are *Tübingen* (for its University), and *Wildbad* (for its medicinal thermal springs).

INDUSTRIES.—The people, generally, are engaged in *Agricultural*, and *Pastoral Pursuits*. *Mining* flourishes in the N. districts of the kingdom. *Manufactures*, principally cotton, linen, woollen, and silk fabrics, toys, clocks, paper, printing apparatus, lacquered tin wares, and mathematical instruments, are general in the chief towns.

COMMUNICATIONS.—The *Turnpike Roads* are very bad in the Black Forest circle; elsewhere they are fairly well kept. The kingdom is well supplied with *Railways*, and with *Telegraphic Lines*.

GOVERNMENT, RELIGION, AND EDUCATION.—The kingdom of Württemberg is a constitutional and hereditary Monarchy. With respect to *Religion*, about two-thirds of the people are Protestants, the remainder Roman Catholics. *Education* is general and compulsory.

SAXONY.

GENERAL FACTS OF PHYSICAL GEOGRAPHY.

Latitude. Between 50° 10' and 51° 28' N. *Longitude.* Between 11° 55' and 15° 3' E.
Area. 5,787 sq. m.

POSITION AND BOUNDARIES.—Saxony lies in the S.E. of the German Empire. It is bounded on the N. and N.E. by Prussia. S.E. and S. by Austria. W. by Bavaria, Reuss, Saxe-Weimar, Altenburg, and Prussia.

SURFACE.—Saxony has a mean elevation of about 1,100 ft., and exhibits plains in the N.; uplands in the centre; and mountains in the S.E. and S. The chief mountains are the *Erzgebirge*, on the

S. frontier, and their northward ramifications, which cover a large part of the State ; and the Riesengebirge, on the S.E. The rugged region known as "Saxon Switzerland" lies in the S.E.

DRAINAGE.—The drainage is carried N.W. into the North Sea by the *Elbe* (see pp. 20, 89), and its tributaries, the *Mulde*, and *Elster*.

CLIMATE AND PRODUCTIONS.—The *Climate* is temperate in the N. districts ; but the winters are very severe in the mountainous regions. The *Productions* include the vine, oats, potatoes, fruits ; timber, coal, iron, lead, building-stones, and precious stones.

PEOPLE AND LANGUAGE.—In 1875 the *Population* was 2,760,586, who are all Germans, except a few Wends, and speak *German*.

POLITICAL GEOGRAPHY.

POLITICAL DIVISIONS.—For administrative purposes Saxony is divided into 4 *Government Districts*, as given in the table following.

DISTRICTS.	CAPITALS.	DISTRICTS.	CAPITALS.
1. Bautzen	<i>Bautzen.</i>	3. Leipzig	<i>Leipzig.</i>
2. Dresden	<i>Dresden.</i>	4. Zwickau	<i>Zwickau.</i>

NOTES ON THE TOWNS.—The six most populous towns are *Dresden* (197,295), *Leipzig* (127,387), *Chemnitz* (78,209), *Zwickau* (31,491), *Plauen* (28,756), *Freiberg* (23,559).

Obs. Dresden, the capital of Saxony, the seat of government, and the residence of the royal family, lies on the Elbe, and at the junction of railways from Vienna, Berlin, Leipzig, &c. Its picturesque situation and its celebrated art treasures have gained for it the name of the "German Florence." The Picture Gallery is especially famous, and contains the finest collection of paintings and prints in Germany. The famous *Dresden china* is made at Meissen, 15 m. N.W. of Dresden.

The chief industrial centres are *Dresden* (silks, woollens, musical and mathematical instruments, &c.), *Leipzig* (book-trade, type-founding, commerce, &c.), *Zwickau* (mining, woollens, &c.), *Plauen* (linens, cottons, &c.), *Freiberg* (mining, smelting, brewing, &c.), *Chemnitz* (cottons, the "Manchester" of Saxony).

INDUSTRIES AND COMMUNICATIONS.—The chief industries are *Agriculture*, which is carried on with great skill and vigour ; *Manufactures*, especially of cotton, woollen, linen, and iron goods ; and *Mining*, particularly coal, iron, silver, and tin mining. *Turnpike Roads* are good, and there are complete networks of *Railways* and *Telegraphic Lines*.

Obs. Leipzig is the emporium of the German book trade. Its three fairs—New Year, Easter, and Michaelmas—are attended by buyers and sellers from all parts of Europe and W. Asia.

GOVERNMENT, RELIGION, AND EDUCATION.—The *Government* is an hereditary constitutional Monarchy. The *Religion* is Christian, the bulk of the Saxons being Lutherans. *Education* is compulsory, and has its utmost development in Saxony. The Leipzig University is the largest in Germany, and is attended by 3,000 students.

THE GRAND DUCHY OF BADEN.

GENERAL FACTS OF PHYSICAL GEOGRAPHY.

THE State of Baden lies almost entirely between the kingdom of Württemberg and the Rhine. Its *mean lat.* is 48° 40' N., and its *area* 5,893 sq. m. It is traversed from N. to S. by the *Black Forest mountains*, and *drained* by parts of the Danube, Rhine, Neckar, and Lake Constance. The *climate* is healthy, but the winters are excessively cold in the Black Forest. The *productions* include grain, fruit, timber, salt, coal, alum, silver, copper, and lead. The *population* numbers 1,507,179, and consists almost entirely of *German speaking* people.

POLITICAL GEOGRAPHY.

POLITICAL DIVISIONS.—Baden, for administrative purposes, is divided into 4 *Districts*, which, with their chief towns, are as follows:

DISTRICTS.	CAPITALS.	DISTRICTS.	CAPITALS.
1. Constance	<i>Constance.</i>	3. Carlsruhe	<i>Carlsruhe.</i>
2. Freiburg	<i>Freiburg.</i>	4. Mannheim	<i>Mannheim.</i>

NOTES ON THE TOWNS.—The five most **populous towns** are *Mannheim* (46,453), *Carlsruhe* (42,895), *Freiburg* (30,595), *Pforzheim* (23,692), *Heidelberg* (22,334).

Obs. Carlsruhe, the capital, is on the Basle and Frankfort Railway. The town is regularly built, in the shape of a wheel, its principal streets radiating from the palace.

The chief **industrial centres** are *Carlsruhe*, and *Heidelberg* (for machinery), *St. Blasien* and *Ludenburg* (metal goods, and arms), *Schopfheim*, and *Constance* (cotton goods), *Pforzheim* (bijouterie).

Obs. Baden is the home of the manufacture of *wooden articles*, and the Black Forest is the seat of the wooden clockmaking.

Other **notable towns** are *Mannheim* (a great commercial centre), *Baden* (a celebrated watering-place), and *Kehl* (commerce).

INDUSTRIES, AND COMMUNICATIONS.—The people of Baden are chiefly occupied in *Agriculture*—which is in a very advanced state, in *Grazing*, *Mining*, *Manufactures*—especially of cotton and silk fabrics, straw-plait, wooden ornaments, jewelry, music boxes, clocks and watches, and in *Lumbering*. *Communications* are carried on by good *Turnpike Roads*, an excellent *Railway System*, a busy *River Navigation*, and an efficient *Telegraphic System*.

GOVERNMENT, RELIGION, AND EDUCATION.—The *Government* of Baden is a constitutional and hereditary Monarchy. The prevailing form of *Religion* is Romanism. *Education* is compulsory, and under the direction of the State.

THE REMAINING MINOR STATES.

The remaining 21 States of Germany call for no further description here than may be gathered from the following table and the notes appended to it:—

	STATES.	AREA IN SQ. MLS.	POPULA- TION IN 1875.	CAPITALS.	OTHER IMPORTANT TOWNS.
GRAND DUCHIES. DUCHIES. PRINCIPALITIES. FREE TOWNS.	1. MECKLENBURG-SCHWERIN ¹ ..	5,135	553,785	Schwerin	Rostock, Wismar.
	2. HESSE ²	2,964	884,218	Darmstadt.....	Mayence, Offenbach, Worms.
	3. OLDENBURG ³	2,470	319,314	Oldenburg	Varel, Oberstein.
	4. SAXE-WEIMAR ⁴ ..	1,487	292,933	Weimar	Eisenach, Apolda.
	5. MECKLENBURG-STRELITZ ⁵ ..	1,130	95,673	New Strelitz....	Neubrandenburg.
	6. BRUNSWICK ⁶	1,424	327,493	Brunswick ..	Helmstedt, Wolfenbüttel.
	7. SAXE-MEININGEN ⁷ ..	952	194,494	Meiningen.....	Sonneberg, Saalfeld.
	8. ANHALT ⁸	906	213,565	Deesau	Bernberg, Köthen, Zerbst.
	9. SAXE-COBURG-GOTHA ⁹	760	182,599	Gotha and Coburg	Ohrdruff, Waltershausen.
	10. SAXE-ALTENBURG ⁹	510	145,844	Altenburg	Schmölln, Ronneburg.
	11. WALDECK ¹⁰	433	54,743	Arolsen	Korbach, Wildungen.
	12. LIPPE-DETMOLD ¹¹ ..	459	112,452	Detmold	Lemgo, Lage.
	13. SCHWARZBURG-RUDOLSTADT ..	364	76,676	Rudolstadt	Frankenhausen.
	14. SCHWARZBURG-SONDERSHAUSEN	333	67,480	Sondershausen..	Arnstadt.
	15. REUSS-SCHLEIZ.....	320	92,375	Gera	Schleiz.
	16. SCHAUMBURG-LIPPE.....	171	33,133	Bückeburg.....	Stadthagen.
	17. REUSS-GREIZ.....	122	46,985	Greiz	Zeulenrode.
REICH- LAND.	18. HAMBURG	157	388,618	"Free towns" or "cities" are towns or cities of the German Empire which are independent in their government and franchises, and exempt from the customs of the Zollverein. For these privileges annual sums of so much per head of the population are paid by the free cities.	
	19. LÜBECK	109	56,912		
	20. BREMEN	98	142,200		
	21. ALSACE-LORRAINE ¹² ..	5,600	1,531,804	Strasbourg .. Colmar Metz	Bremenhafen. Mülhausen, Hagenau.

¹ Pasturing is the chief industry of Mecklenburg-Schwerin.

² Hesse is mountainous, healthy, and fertile. Its chief industries are Agriculture, Mining, and Manufactures.

³ Oldenburg is flat, moist, fertile, in parts, and its people are chiefly occupied in grazing.

⁴ Saxe-Weimar consists of a number of detached parts.

⁵ Mecklenburg-Strelitz consists of two detached parts, viz., 1. The Duchy of Strelitz; 2. The Principality of Lützelburg.

⁶ Brunswick is mountainous and rather arid; the climate is rigorous; the chief industries are

Agriculture and Mining.

⁷ Saxe-Meiningen consists of several detached parts.

⁸ Anhalt consists of the Duchies of Dessau, Köthen, and Bernberg.

⁹ Saxe-Coburg-Gotha and Saxe-Altenburg consists of several detached parts.

¹⁰ Waldeck is composed of Waldeck Proper and Waldeck Pyrmont.

¹¹ Lippe-Deimold is hilly and well wooded.

¹² Alsace-Lorraine, wrested from France in 1871, is divided into 3 districts, viz., 1. Upper Alsace; 2. Lower Alsace; and 3. Lorraine.

NOTES ON THE TOWNS.—The five most populous towns in these states are *Hamburg* (264,675), *Bremen* (102,532), *Strasbourg* (94,306), *Brunswick* (65,938), *Mülhausen* (58,463).

Obs. Hamburg, on the Elbe, 70 m. from its mouth, is the principal sea-port of Germany, and one of the chief commercial centres of Europe. It is a handsomely built city, and celebrated for its munificent charitable institutions. It is the birth-place of *Mendelssohn*.

Bremen, on the Weser, is, after Hamburg, the most important port of Germany.

Strasbourg, a strong frontier fortress on the Rhine, is renowned for its splendid Gothic cathedral, which has the loftiest spire (468 ft.) in the world.

Brunswick, on the Ocker, is famous for its educational and literary institutions.

Mülhausen, on the Ill, is celebrated for its cotton, woollen, muslin, and silk goods.

Mayence (pop. 56,421), a strong fortress on the Rhine, is the birthplace of *Gutenberg*, the cradle of the art of printing, and a busy commercial centre.

Metz, an important fortress on the Moselle, was surrendered to Germany, with a very large army, October, 1870, by Marshal Bazaine. Pop., 45,856.

Lubeck, chief of the three "Free Towns," is an important port, and one of the most picturesque towns of Germany. Pop., 44,799.

Rostock, on the Wornow, is a flourishing seaport with a large ship-building trade. Pop., 34,172.

Colmar, near the foot of the Vosges, is the centre of a manufacturing district of cotton and printed goods. Pop., 23,990.

PEOPLE, LANGUAGE, RELIGION, AND EDUCATION.—The *people* of these minor States number 5,813,296, and are all Germans, with the exception of the Jews and other foreigners whom business exigences draw into residence. The *Language* spoken is German; the *Religion* mostly Protestant; and *Education* is, in nearly all the States, compulsory for children from 6 to 14 years of age.

AUSTRIA; OR, THE AUSTRO-HUNGARIAN EMPIRE.

PHYSICAL GEOGRAPHY.

Latitude. Between 42° 9' and 51° 2' N. *Longitude.* Between 9° 35' and 26° 25' E.
Area. 240,262 sq. m.

POSITION AND BOUNDARIES.—The Austro-Hungarian Empire lies towards the E. of Central Europe. It is bounded on the

N. by Prussia. N.E. by Russia. N.W. and W. by Germany (Saxony and Bavaria). S.W. by Switzerland and Italy. S. by Turkey and Servia. S.E. by Roumania.

COASTS.—The only seaboard of Austria lies on the N.E. coast of the Adriatic, and is only 440 m. in extent; and the greater part of it is fringed with islands. Of the

Capes, the chief is the Punta di Promontore, S. of the Istrian Peninsula.
Inlets, the chief are the Gulfs of Trieste, Quarnero, and Cattaro.

ISLANDS.—These are very numerous; the most important are *Cherso*, *Veglia*, *Pago*, *Lunga*, *Brazza*, *Lesina*, *Curzola*, and *Meleda*.

SURFACE.—About three-fourths of Austria are mountainous, and these parts lie in the W.; N.W.; N.; and E. In the centre, and S. of the centre, are some extensive plains, and some marshy and malarious districts. The most notable surface features are the

1. Mountains, which belong principally to the three following systems, viz.

a. The *Austrian Alps*, which lie in the W. and cover a large part of Austria proper. This system embraces the *Orteler*, *Tyrolese*, *High Tauern*, *Styrian*, *Trientine*, *Carnic*, and *Julian Sections* of the E. part of the Alpine barrier, and culminates in the *Orteler Spize* (12,814 ft.), in the Tyrolese Alps.

b. The *Carpathians*, which stretch from W. to E. and S.E. in a semicircle of 800 m. long on the N. and E. frontiers of the empire. The chief divisions of the system are the *Little Carpathians* on the W.; the *Beskidien Range*; the *Western Carpathians*, or *Carpathians Proper*, including the Mass of *Tatra*; the *Eastern Carpathians*; and the *Transylvanian Alps*, which include *Mt. Negoi* (8,346 ft.), the loftiest point in the system.

Obs. A more natural division of the Carpathian system is into—1. A N.W. Mass; 2. An intermediate chain, called the *Waldgebirge*; and 3. A S.E. Mass. Some geographers divide them into 4 parts, viz.—1. The N.W. Carpathians; 2. The Central Carpathians, including the *Tatra Mass*; 3. The *Waldgebirge* or *Wooded Carpathians*; 4. The *Transylvanian Carpathians*.

c. The *Bohemian and Moravian Systems*, which embrace the *Sudeten Mts.*, the *Riesengebirge*, the *Erzgebirge*, and the *Böhmer Wald*. The loftiest point is *Schneekoppe* (5,255 ft.), in the *Sudeten Mts.*

Obs. Among these mountains are embraced a countless number of valleys which, from their general aspect and beauty of site, are reckoned among the most interesting and picturesque places in Europe.

2. Plateaux, which occupy large areas in different parts of the Empire. The chief of them are the

a. *Bohemian Plateau*, which lies in the N.W., and is completely enclosed by the ramifications of the Sudetic system, and the *Böhmer Wald*.

b. *Hungarian Plateau*, which is buttressed on the W. by the *Little Carpathians*, on the N. by the *Beskidien Mountains*, and on the S. by a low range called *Matra*.

c. *Transylvanian Plateau*, which lies in the S.E., and is enclosed between the *Carpathian Mountains* and a W. branch, called the *Transylvanian Erzgebirge*.

3. Plains, which are numerous and extensive, but of which the most important are the

a. *Plain of Upper Hungary*, a well-watered, fertile, and highly productive region, which lies between the *Hungarian Plateau*, the *Bakony Wald*, and the high lands of *Styria*.

b. *Plain of Lower Hungary*, a flat, extensive, and most prolific tract of territory, almost as large as *Ireland*, which is enclosed by the *Carpathians*, the *Transylvanian Plateau*, the *Danube*, and the *Bakony Wald*. Great sandy wastes mar the centre of this plain, and there are vast marshes in the centre and in the S.; but the marshes are being rapidly reclaimed.

Obs. Both these plains are notable grain and fruit producing regions.

DRAINAGE.—The drainage of Austria is carried S.E. into the *Black Sea* and the *Adriatic*; and N.W. to the *North Sea* and the *Baltic*. The chief draining agents are the

1. Rivers, which flow down the

a. S.E. Slope, into the

a. *Adriatic*, viz., the Etsch, and the Sdobba, formed by the Judrio and Isonzo.

b. *Black Sea*, viz., the Danube with its five great Austrian *tributaries*, the Inn, March, Drave, Save, and Theiss; and the Dniester.

b. N.W. Slope, into the

a. *North Sea*, viz., the Elbe (pp. 20, 89), with its Austrian *tributaries*, the Moldau, and Eger.

b. *Baltic*, viz., the Oder (p. 89), and Vistula (pp. 20, 89) with its Austrian *tributary*, the San.

Obs. 1. The **Danube** (pp. 21, 89), which enters the Austrian dominions at Passau, flows E. to Waitzen, in the centre of the Empire, has thence a S. course till it is met by the Drave, and then keeps on a S.E. course till it reaches Belgrad on the S. frontier. From this point it flows E. between Austria and Turkey until it comes to Orsova, when it enters Wallachia. The chief Austrian *tributaries* of the Danube are the

a. *Inn*, which rises at the head of the Engadine, in Switzerland, flows N.E. over a course of 313 m., and enters the Danube at Passau.

b. *March* or *Morava*, which rises in the Sudeten Mountains, waters Moravia, and after a S. course of 180 m. falls into the Danube on the left bank, a few miles W. of Pressburg.

c. *Drave*, which rises in the Tyrol, flows E., and after a course of 447 m. falls into the Danube a few miles E. of Eszek, on the right bank.

d. *Save*, which rises in Mt. Terglou, flows S.E. for 442 m., and enters the Danube on its right bank, at Belgrad.

e. *Theiss*, which has its sources in the Carpathians, and is the largest of the purely Austrian rivers. It waters nearly the whole of Transylvania and the E. part of Hungary, and after a S.W. and S. course of 843 m. falls into the Danube on the left bank a few miles W. of Belgrad.

Obs. 2. The **Dniester** rises in Galicia, on the N. slope of the Carpathians. Only the upper part of its course (330 m.) belongs to Austria. The remaining part of this sinuous and rapid stream is in Russia.

2. **Lakes** are numerous and in many instances celebrated for their charming and romantic scenery. The best known of them is *Lake Balaton* or *Platten Sea*, which occupies a depressed basin E. of the Bakony Wald. It ranks among the large European lakes, being 383 sq. m. in *extent*. Its waters are shallow, slightly salt, and abound in fish.

CLIMATE.—The Austro-Hungarian empire enjoys a healthy, though extremely varied climate. In the N. parts it is cold and bleak; in the S., warm and genial; in the centre, temperate and dry. Much rain falls in the Austrian Alpine region. The winds from the S. are hot and scorching, while those from the N. are cold and boisterous. The *mean annual temperature* at Vienna is about 52° Fahr.

PRODUCTIONS.—The Austro-Hungarian empire contains some of the richest soil in Europe, and its natural productions are extremely rich and varied.

The most characteristic of them are *corn, cattle, wine; timber; iron, gold, silver, mercury* (Idria), *copper; coal, salt, and precious stones.*

Obs. As a **wine-growing country**, Austria ranks next to France. Many of the Hungarian wines are of unrivalled quality, especially *Tokay*, which is cultivated and manufactured with the utmost skill and care. The annual yield of Austrian wine is about 375,000,000 gallons.

PEOPLE AND LANGUAGES.—In 1869 the *Population* was 35,906,035. Of these, 46 p. c. are *Slavonians*, who speak Bohemian, Polish, or some other Slavonic dialect; 26 p. c. are *Germans*, who speak German; 16 p. c. *Magyars*, the dominant race in Hungary, who speak Hungarian (*Magyar*). There are also a good many *Jews*, who generally speak German.

POLITICAL GEOGRAPHY.

POLITICAL DIVISIONS.—The Austro-Hungarian Monarchy is divided into 18 *Crown Lands* or *Provinces*. Of these, the first 14 in the following table belong to the *German Monarchy*, and the last 4 to *Hungary*.

PROVINCES.	CAPITALS.	PROVINCES.	CAPITALS.
1. <i>Bukovina</i>	<i>Czernowitz</i> .	10. <i>Carinthia</i>	<i>Klagenfurt</i> .
2. <i>Galicia</i>	<i>Lemberg</i> .	11. <i>Styria</i>	<i>Grätz</i> .
3. <i>Silesia</i>	<i>Troppau</i> .	12. <i>Carniola</i> ..	<i>Laybach</i> .
4. <i>Moravia</i>	<i>Brünn</i> .	13. <i>Coast Land</i>	<i>Trieste</i> .
5. <i>Bohemia</i>	<i>Prague</i> .	14. <i>Dalmatia</i>	<i>Zara</i> .
6. <i>Lower Austria</i>	<i>Vienna</i> .	15. <i>Hungary Proper</i> ..	<i>Buda-Pesth</i> .
7. <i>Upper Austria</i>	<i>Lintz</i> .	16. <i>Transylvania</i>	<i>Klausenburg</i> .
8. <i>Salzburg</i>	<i>Salzburg</i> .	17. <i>Croatia and Slavonia</i>	<i>Agram</i> .
9. <i>Tyrol and Vorarlberg</i>	<i>Innsbruck</i> .	18. <i>Fiume and District</i> ..	<i>Fiume</i> .

NOTES ON THE TOWNS.—The seven most populous towns are *Vienna* (833,855), *Buda-Pesth* (270,476), *Prague* (189,949), *Trieste* (109,324), *Lemberg* (87,109), *Grätz* (81,119), *Brünn* (73,771), *Szegedin* (70,179).

Obs. *Vienna*, the metropolis, the chief arsenal, and the principal manufacturing town of Austria, lies on the Danube, and at the head of 6 different railways, which connect it with all parts of the continent. It is one of the largest and handsomest cities in Europe, the see of an archbishop, and the seat of a university which is renowned for its School of Medicine. Colleges, Academies, Institutes, Schools, Libraries, Museums, Picture Galleries, Theatres, and every other means and appliance for the encouragement and cultivation of literature, science, and art, abound in Vienna.

The chief **naval port** is *Pola*, the "Sebastopol" of the Adriatic.

The chief **commercial ports** are *Trieste*, *Fiume*, *Pirano*, and *Rovigno*.

The principal **industrial centres** are *Vienna* (silk, velvets, cottons, woollens, commerce, &c.), *Buda-Pesth* (cloth, leather, silks, velvets, woollens, commerce), *Prague* (cottons, linens, silks, woollens, commerce), *Lemberg* (linens, woollens, jewelry, transit trade), *Grätz* (cottons, silks, woollens, ironwares, commerce), *Brünn* (cottons, linens, woollens, muslins, &c.), *Czernowitz* (clocks, silver-goods, ironwork, &c.), &c.

Other **places of note** are *Austerlitz*, *Wagram*, and *Sadowa* (celebrated battle-fields), *Lintz*, *Olmütz*, *Kronstadt*, and *Öfen* (strongly-fortified towns), *Tokay* (the centre of the celebrated Hungarian wine-producing district), and *Salzburg* (the birth-place of Haydn and Mozart).

INDUSTRIES.—The majority of the people are engaged in *Agriculture* and *Cattle-rearing*. *Forests* cover almost a third of the productive area of the empire, and give employment to a large proportion of the people. *Mining* and *Metal-working* form very important branches of the industries of the country. *Manufac-*

tures are being assiduously developed, and comprise cotton, flax, hemp, woollen and silk stuffs, iron and steel wares, metal-smelting, leather, paper, beer, spirits, sugar, porcelain, glass, earthenware, carriages, chemicals, musical, scientific, and surgical instruments.

Obs. The chief exports are grain, hardwares, wood, wool, glass, and manufactured fabrics. The chief imports, raw cotton, coffee, indigo, and machinery.

COMMUNICATIONS.—These comprise systems of excellent *Roads*, *Railroads*, and *Telegraphs*, and a very great length of *Navigable Rivers*.

GOVERNMENT, RELIGION, AND EDUCATION.—The *Government* is a constitutional Monarchy. Each part of the empire has its own legislature and its own government; but both are under the same head, who reigns as *Emperor* in Austria, and as *King* in Hungary. The prevailing *Religion* is Roman Catholicism; but there are many Greek and Armenian Catholics, many Jews and Lutherans, and for all, complete religious toleration. *Education* is general and compulsory.

TURKEY.¹

PHYSICAL GEOGRAPHY.

Obs. Turkey, or the Ottoman² Empire, comprises extensive territories in Europe, Asia, and Africa. The European and Asiatic territories together constitute what is known as "Turkey proper," of which Turkey in Europe is by far the smallest part.

TURKEY IN EUROPE.

Latitude. Between 38° 50' and 45° 16' N. *Longitude.* Between 15° 40' and 29° 10' E.
Area. Estimated at 130,533 sq. m.

Obs. These limits do not embrace Crete, and the neighbouring isles.

POSITION AND BOUNDARIES.—Turkey lies in the S. of Europe. It is bounded on the

N. by Austria, Servia, and Roumania. E. by the Black Sea, and the Bosphorus. S. by the Sea of Marmara, Hellespont, Ægean Sea, and Greece. W. by the Ionian Sea, Strait of Otranto, Adriatic, and Austria.

COASTS.—The *Coast-line* skirts 5 Seas—viz., the Black Sea, the Sea of Marmara, the Ægean, Ionian, and Adriatic Seas—and has a total length of about 1,300 m. The E. and S.E. shores include some excellent harbours. Of the

1. **Capes**, the chief are, Kali Akra, and Eminch, on the E.; Monte Santo, Drepano, Paliuri, on the S.; Linguetta, St. Amana, Pali, and Rodoni, on the W.
2. **Inlets**, the most important are, the Gulf of Burgas, on the E.; the Gulfs of Saros, Orfana or Contessa, Monte Santo, Cassandra, Saloniki, and Volo, on the S.; and Avlona Bay, on the W.
3. **Straits**, the best known are the Bosphorus or Straits of Constantinople, on the E.; Hellespont or Dardanelles, on the S.; and Otranto, on the W.

¹ Turkey probably takes its name from the first Sultan, who ruled the empire from A.D. 1299 to A.D. 1326.

² So called from *Othoman*, *Othman*, or *Osman*,

Obs. 1. The **Bosporus** or **Strait of Constantinople**, separates Europe from Asia and joins the Sea of Marmara to the Black Sea. It is about 20 m. long, and from $\frac{1}{2}$ to 2 m. broad. Near its S. extremity it sends off a branch called the "Golden Horn," which bounds Constantinople on the N. and forms one of the finest harbours in the world.

Obs. 2. **Hellespont** or **Dardanelles**, a narrow channel of 40 m. long, and of from 1 m. to 4 m. broad, between Europe and Turkey in Asia. The waters of the Sea of Marmara discharge themselves through this Strait into the Mediterranean in a constant current.

Obs. 3. The **Strait of Otranto**, lies between Italy and Turkey and connects the Adriatic with the Mediterranean. It is 44 m. broad in its narrowest part.

ISLANDS.—The chief island of European Turkey is *Crete* or *Candia*.

Obs. *Crete* or *Candia*, after Cyprus the largest of the Mediterranean islands peopled by Greeks, occupies a most important and advantageous position across the entrance to the Archipelago, between Europe, Asia, and Africa. It is about 150 m. long from E. to W., and from 6 to 36 m. broad, and has an area of about 3,000 sq. m. Its mean lat. is $35^{\circ} 18' N.$; mean long. $25^{\circ} E.$ The climate, except in the summer when it is sometimes too dry, is delicious. The chief products are oil, wine, corn, oranges, honey, and various aromatic plants. The population is 210,000, who are nearly all Greeks; and Greek is the common language of the island. For administrative purposes Crete is divided into 3 provinces, viz., Candia, Retimo, and Khania. The chief towns are Khania, the capital, Candia, the old capital, and Retimo, which are all seaports on the N. coast. The chief manufactures are, soap, leather, spirits, sacking, and coarse cloths. Crete is under the government of a Pasha.

SURFACE.—The surface of European Turkey is at present but imperfectly known. It has a mean elevation of 1,902 ft., and is, generally, mountainous; but most of the greatest elevations fall short of the line of perpetual snow. All central Turkey forms a vast plateau, while the coasts are, for the most part, skirted by a narrow strip of low-lying land which includes several extensive and fetid marshes. The surface features to be noted here are the

1. **Mountains**, of which there are five principal groups, viz.

a. The *Balkans*,¹ which run E. and W. between Bulgaria and Roumelia. Their highest point is *Mt. Jümruktschal* (7,830 ft.).

b. The *Despoto Dag*² or *Rhodope Mts.*, a huge mountain plateau between the Struma and Maritza rivers, in Roumelia. Its loftiest summit is *Rilo Dag*² (9,018 ft.), which lies at the N. extremity of the system.

c. The *Mountains of Bosnia and Herzegovina*, which lie in the N.W. of the country, and run parallel with the Adriatic coast. They embrace many summits of upwards of 6,000 ft. above the sea, but culminate in *Vitosch* (7,652 ft.).

d. The *Pindus Mts.*, which stretch N.W. and S.E. between Thessaly and Albania, and have for their highest point *Karavi* (6,970 ft.).

e. *Olympus*, which skirts the N.W. shores of the Gulf of Saloniki, and includes *Olympus* (9,754 ft.), the highest summit in Turkey.

2. **Plains and Valleys.**—The surface of Turkey, mountainous and contorted as its configuration is, does not afford much place for extensive plains or very large valleys. The following are the largest and best known of them, viz.

a. The *Thracian Plain*, which extends from the Sea of Marmara in the S. to the Balkans on the N., and comprises chiefly the great basin of the Maritza. It is the most productive and the best cultivated region in Turkey.

b. The *Macedonian Plain*, which lies N. and about the head of the Gulf of Saloniki. It is watered by the Struma and Vardar, and embraces several fertile tracts where tobacco, cotton, vines, olives, &c., are cultivated.

¹ Ba'kan, Turk.—high ridge, called also *Mount Hamus*, or *Snowy Mount*, (from Sans. "Hima"—snow.)

² Dag — a mountain.

c. The *Plain of Thessaly*, which lies E. of the Pindus range and embraces chiefly the valley of the Salambria. It is very fertile, yielding large crops of cereals, vegetables, tobacco, olives, and fruits. It also includes rich pastures whereon large herds of cattle are reared, and famous breeds of horses.

d. The *Vale of Tempe*, or the lower valley of the Salambria, which is a narrow defile between two stupendous mountains, Ossa, and Olympus, riven asunder by earthquakes.

DRAINAGE.—The drainage of Turkey belongs to the basins of the Black, *Ægean*, *Ionian*, and *Adriatic* Seas. The chief draining agents are

1. The **Rivers**, which flow into the

a. *Black Sea*, viz., the Danube, Pravadî, and Kamtchyk.

b. *Ægean Sea*, viz., the Maritza (with its *tributaries* Arda, Tundscha, and Erkeneh), Kara Su, Struma, Vardar, Vistritz, and Salambria.

c. *Ionian and Adriatic Seas*, viz., the Arta, Kalamas, Viossa, Ergent, Skumbi, Drin, Boyana, and Narenta.

Obs. The **Danube** (see pp. 21, 89, 101) enters Turkey at the confluence of the Timok, and thence to a point a little E. of Silistria separates Turkey from Roumania. The Turkish *tributaries* of the Danube are the Save (with its *affluents* the Unna, Verbas, Bosna, and Drin), Isker, Vid, Osma, Yantra, and Lom. The Danube between Silistria and the confluence of the Pruth now flows through Roumania. Thence to the sea it separates Russia from Roumania.

Obs. 2. Except the Danube, Turkey possesses no European river which is navigable throughout the entire year.

2. **Lakes**, which are not important. The best known of them are

a. *Lake Scutari*, which lies partly in Albania and partly in Montenegro, near the Adriatic coast. It is 20 m. long, and has a mean breadth of 5 m. It receives the Moratschai at its N. extremity, and is drained by the Drinassi.

b. *Lake Ochrida*, in Albania, which is most charmingly situated in the midst of lofty mountains. It is 18 m. long, has an extreme breadth of 8 m., and is drained by the Black Drin.

Obs. Other Turkish lakes are *Presba*, *Yanina*, *Kastoria*, *Ostrovo*, *Betschik*, and *Takimo*.

CLIMATE.—The general climate of Turkey is genial and salubrious. Large tracts, however, of low-lying land both on the Danube and on the coasts of the various seas are swampy and malarious. Owing to the mountainous character of the country, the temperature is lower than the normal for the same latitudes, but extremes both of heat and of cold are experienced in various parts of the country.

PRODUCTIONS.—The soil of Turkey has ever been noted for its wonderful fertility. *Sheep* are reared in vast numbers, for their wool; goats and pigs, for their flesh. The *Vegetable Productions* include corn, fine fruits, and timber, all of the most excellent quality; tobacco, silk, and cotton; opium, gums, liquorice; madder, galls, and valonia¹ acorns. Roses are extensively cultivated for their *Attar* or *Otto*. The *Mineral* wealth of the country is known to be vast and varied; but no serious practical efforts have been made to realise these treasures.

PEOPLE, AND LANGUAGES.—The *Population* of European Turkey was estimated, in 1878, at 8,867,000, consisting of many different

¹ Valonia is the cup of the acorn of the "*Quercus Ægilops*," and is largely imported from Turkey as an important tanning agent.

nationalities. Of these the chief are *Slavs, Servians, and Bulgarians, Turks, Greeks, and Albanians*. There are also, *Armenians, Jews, Gipsies, and Foreigners*, amounting together to about 330,000 souls. The principal *Languages* are Bulgarian and Servian, spoken by the Slavonians; Turkish, spoken by the Ottomans; and Albanian, spoken by the Albanians.

POLITICAL GEOGRAPHY.

POLITICAL DIVISIONS.—The European portion of the Ottoman Empire as remodelled by “The Treaty of Berlin,” 1878, consists of the following parts, viz. :—1. Immediate Possessions. 2. The Autonomous Province of Eastern Roumelia. 3. Bosnia and Herzegovina, occupied and administered by Austria. 4. The Tributary Principality of Bulgaria. For Administrative purposes Turkey is divided into *Vilayets*, or Governments: the Vilayets are subdivided into *Sandjaks*, or Districts: the Sandjaks, into *Kazas*, or arrondissements: the Kazas, into *Rahijs*, or Communes.

Obs. Map-makers still retain the *Historical Divisions*, Roumelia, Bulgaria, Bosnia, Albania, &c., also the *Classical Divisions*, Macedonia, Thrace, Thessaly, Illyricum, &c. But the Turks themselves recognise none but the existing *Official Divisions*.

The following table shows the *Official Divisions* in their local relation to the *Historical Divisions*.

Obs. The *Vilayets* and *Sandjaks* are named respectively after their capital towns.

HISTORICAL DIVISIONS.	VILAYETS.	CAPITALS.	SANDJAKS AND CHIEF TOWNS.
I. IMMEDIATE POSSESSIONS.			
I. ROUMELIA ...	Constantinople	Constantinople	
	Adrianople ..	Adrianople ..	Adrianople, Rodosto, Gallipoli.
	Saloniki	Saloniki	Saloniki, Seres, Drama.
	Yanina	Yanina	Yanina, Trikala, Preveza, Agrykastro, Berat.
II. ALBANIA	Prisrend	Prisrend	Prisrend, Korytza, Bitolia, Skoplja, Divra.
	Scutari	Scutari	
III. ISLAND	Orete	Khania	(3 Provinces) — Khania, Candia, Retimo.
II. TRIBUTARY, OCCUPIED, AND AUTONOMOUS POSSESSIONS.			
I. BULGARIA	Danube	Tirnova	Tirnova, Varna, Rustchuk, Widin, Sofia.
II. E. ROUMELIA..	N. Adrianople	Philippopolis	Philippopolis, Sliven.
III. BOSNIA AND HERZEGOVINA	Bosnia	Bosna Serai ..	Novibazar, ¹ Seralevo, Svornik, Banjaluka, Bihatz, Travnik.
	Herzegovina..	Mostar	Mostar.

NOTES ON THE TOWNS.—The five most populous towns of Turkey are *Constantinople* (600,000), *Adrianople* (60,000), *Saloniki* (60,000), *Philippopolis* (50,000), and *Gallipoli* (50,000).

Obs. *Constantinople*, the metropolis of Turkey, “The Paradise of the Orientals,” takes its name from Constantine the Great, its founder. Lying at the N.E. extremity of the sea of Marmara, and on the banks of the Golden Horn and the Bos-

¹ The Sandjak of Novibazar is excepted from the Austrian occupation, and remains under the administration of Turkey.

porus, it is the most magnificently situated city in Europe. It comprises within its limits Galata, with Pera on the E. shore of the Golden Horn, and Scutari on the Asiatic side of the Bosphorus. Seen from without, this city presents the most gorgeous and imposing appearance; within, its streets are narrow, crowded, encumbered with filth, and swarming with dogs. The *manufactures* are chiefly meerschaum pipes, and leather goods; but they are not important.

The chief **ports** of Turkey are *Burgas* on the Black Sea, and *Avlona*, on the *Adriatic*.

The chief **commercial centres** are *Scutari*, *Bosna Serai*, *Yanina*, *Rodosto*, *Widin*, *Silistria*, and *Rustchuk*.

INDUSTRIES.—Turkey is now almost entirely an *Agricultural* country. But its agriculture is in a primitive and declining condition. The principal objects of culture are grain, fine fruits, silk, tobacco, cotton, flax, and hemp. *Manufactures*, which were formerly of some importance, are now on the wane. They include silk, woollen, and cotton fabrics; carpets, leather, filigree work, meerschaum pipes, and attar of roses.

Obs. The chief *exports* are wool, hides, corn, cotton, fine fruits, and sponges; the *imports*, cotton and woollen stuffs, cutlery, hardware, and machinery.

COMMUNICATIONS.—These are of the most wretched and inadequate descriptions. *Carriage roads* are almost unknown, and *Water Carriage* is very deficient. The transit trade is done by mules and other beasts of burden, or by rafts on the rivers. The total extent of *Railway* open for traffic is less than 1,000 m.; but there are at work 30,000 m. of *Telegraph Wires*.

GOVERNMENT, RELIGION, AND EDUCATION.—By the Constitution of the 26th Dec. 1876, Turkey became a Constitutional and Hereditary Monarchy. The *Legislative Power* is in the hands of the Sultan; while the *Executive Power* is shared by the Sultan and the "*General Assembly*," which consists of a *Senate* and a *Chamber of Deputies*. The *Religion* of the State is Mohammedanism. But while only some 25 p. c. of the people are *Moslems*, nearly 60 p. c. are *Christians* of the Greek and Armenian churches. The remainder consists of Jews, Roman Catholics, and various Sectarians. *Education* is compulsory for a certain time; but the range of subjects taught in the elementary schools is very circumscribed.

ROUMANIA.

PHYSICAL GEOGRAPHY.

Latitude. Between 43° 40' and 48° 12' N. *Longitude.* Between 22° 28' and 29° 40' E.
Area. 49,247 sq. m.

Obs. The *longitude* and *area* here given are of Roumania as modified by the Treaty of Berlin (1878).

POSITION AND BOUNDARIES.—Roumania lies in the S.E. of Europe. It is bounded on the

N. by Russia, and Austria. E. by Russia, and the Black Sea. S. by Bulgaria, from which it is separated by the Danube. W. by Bulgaria, Servia, and Hungary.

COASTS.—Roumania has upwards of 100 m. of coast on the Black Sea, which was ceded to her, with the Dobrudja, by the "Treaty of Berlin," 1878. Of its

Inlets, the chief are, the Kilia, Sulina, and St. George mouths of the Danube, and Lake Rassein.

ISLANDS.—These are the islands forming the delta of the Danube, viz.: *Letti*, *Tchata*, *St. George*, *Moish*, and *Dranova*, and the *Isle of Serpents*, some 60 m. E. of the mouths of the Danube.

SURFACE.—The surface is mountainous in the W.; flat in the E.; has a good deal of low marshy ground in the S.; and is well wooded. The **Mountains** consist of the E. spurs and buttresses of the *Carpathians* and the *Transsylvanian Alps*.

DRAINAGE.—Roumania belongs entirely to the basin of the Danube, and is drained by affluents of that river. The chief *Rivers* are the Pruth, Sereth, Jalomitza, Aluta, and Schyl.

Obs. The **Pruth** rises in the Carpathians, flows S.E. between Roumania and Bessarabia, and after a course of 391 m. joins the Danube on the left bank, 75 m. W. of the Black Sea.

The **Sereth** rises in the Carpathians, flows S.E. over a course of 401 m. and falls into the Danube a little W. of Galatz.

The **Jalomitza** rises in the Carpathians, flows S.E. and E., and falls into the Danube W. of Hirsova.

CLIMATE.—The climate is variable and unhealthy; it is very hot in summer, and very cold in winter.

PRODUCTIONS.—The chief *Products* are wheat, maize, barley, millet, hemp, and tobacco; vines, and fruits; timber, and pasturage. Large numbers of sheep and cattle are reared, and fine wool is exported. *Minerals* are plentiful, but are very inadequately realized. Salt and petroleum are abundant, and the amber from the valley of the Buseo is renowned.

PEOPLE AND LANGUAGES.—The *Population* is estimated at 5,376,000, of whom more than four and a half millions are *Roumanians*—i.e. descendants of the ancient Dacians and Goths, mixed after Trajan's time with the Italian and Gothic colonists. The remainder is made up of Jews, Bohemians, Slavs, Germans, Hungarians, Armenians, and Greeks. The *Language* of the State is Roumanian, a corrupt dialect of the Latin.

POLITICAL GEOGRAPHY.

POLITICAL DIVISIONS.—For administrative purposes Roumania is divided into 31 *Districts*, or *Departments*. These are subdivided into *Plasi*, or *arrondissements*, which are again divided into *Communes*. The *Dobrudja*, acquired under the "Treaty of Berlin," has not yet been organised.

NOTES ON THE TOWNS.—The five **most populous towns** are *Bucharest* (177,646), *Jassy* (90,000), *Galatz* (80,000), *Botuschany* (39,941), *Ploesti* (33,000).

Obs. **Bucharest**, the capital of Wallachia and the metropolis of all Roumania, is situated on the river Dimbovitza and in a swampy plain. It is the chief entrepôt of the commerce between Austria and Turkey. It covers an area of more than 20 sq. m., and possesses 116 Greek churches.

The chief **ports** are *Galatz*, and *Braila*, on the Danube.

The chief **industrial centres** are *Bucharest* (transit trade), *Braila*, *Galatz*, *Giurgevo*, and *Krajova*.

INDUSTRIES.—The most important industries are *Agriculture*, *Cattle-rearing*, and *Commerce*. Roumania possesses scarcely any *Manufactures*.

Obs. The chief **exports** are wheat, maize, fine wool, wood, and cattle. The chief **imports**, manufactured goods, especially cottons.

COMMUNICATIONS.—These are very imperfect and very inadequate for the proper development of the trade of the country. There are scarcely any good *Macadamised roads*; the *Rivers* are navigable for barges, but the navigation is much impeded by the neglected state of the channels. There are about 800 m. of *Railway*, or 1 m. to every 60 sq. m. of country, and about 4,500 m. of *Telegraph Wires*.

GOVERNMENT, RELIGION, AND EDUCATION.—The *Government* of the country is a constitutional and hereditary Monarchy. The *Religion* of the State, and of nearly the whole of the people, is that of the Greek Church. *Education*, though now engaging the attention of the State, is lamentably defective.

SERVIA.

PHYSICAL GEOGRAPHY.

Latitude. Between 42° 25' and 45° N. *Longitude.* Between 19° 10' and 22° 45' E.
Area. 18,780 sq. m.

POSITION AND BOUNDARIES.—Servia lies on the N. of the Balkan Peninsula. It is bounded on the

N. by Hungary. E. by Roumania, and Bulgaria. S. by Turkey. W. by Bosnia.

SURFACE.—The surface, generally speaking, is very mountainous, being almost wholly covered by ramifications of three great mountain systems, viz.: of the *Carpathians* in the N.E., of the *Balkans* in the S.E. and S., and of the *Dinaric Alps* in the W. Between the mountain ranges are several narrow, and a few wide, valleys; while near the centre of the country, and in the N., are some considerable plains.

Obs. The **summits** of the mountains seldom exceed 5,000 ft. in height; the bulk of them are below 2,000 ft.; while the loftiest point in the country, *Koparnik* (6,037 ft.), occurs in the *Koparnik Mts.*

DRAINAGE.—The Servian territory is copiously watered. It belongs to the basin of the Black Sea, and is drained by the

Danube and its tributaries the Save (with its affluents the Drina and Kolubara), Morava, and Timok.

Obs. The **Morava**, the chief river of Servia, is formed by the union of the E. and W. Morava, the former rising in the Kara Dagh, the latter in the Javor Golia Mts. It traverses the centre of the country from S. to N., dividing it into two unequal parts, and joins the Danube 6 m. N.E. of Semendria.

CLIMATE.—The climate is variable, excessively cold in winter, very hot in summer, with much wind and rain in the autumn. Ague is prevalent in spring and autumn.

PRODUCTIONS.—The chief *Productions* are grain, tobacco, silk, wine, timber, salt, copper, lead, and iron. Immense herds of pigs and goats are reared in the forests, whence also valonia is obtained.

PEOPLE AND LANGUAGE.—The *Population* is estimated at 1,720,000, the greater part of whom are Servians or Slavs; the remainder consists of Wallachians, Gipsies, and Germans. The *Language* spoken is Servian, a variety of the S. Slavonic group.

POLITICAL GEOGRAPHY.

POLITICAL DIVISIONS.—Previous to 1878, Servia was divided into 17 *Districts* and the town of Belgrad. The territory acquired under the "Treaty of Berlin" has not yet been organised.

NOTES ON THE TOWNS.—The chief towns are *Belgrad*, *Semendria*, *Kruschevatz*, *Kragujevatz*, *Jagodina*, *Alexinatz*, and *Poshega*.

Obs. **Belgrad**, the capital of Servia, lies on the Danube, at the confluence of the Save. It is strongly fortified, but its streets are filthy, ill-paved, and inadequately lighted. It is an important port, and the chief entrepôt of the trade between Turkey and Austria. It has *manufactories* of arms, carpets, silk goods, cutlery, and saddlery.

INDUSTRIES.—The principal part of the people are occupied in *Agriculture*. *Commerce* holds the next place of importance; there is some *Mining*; but *Manufactures* hardly exist out of Belgrad. The chief *exports* are cereals, live stock, pigs, sheep, and goat-skins.

COMMUNICATIONS.—Except the Save and the Danube the rivers are not much used for navigation. *Roads* are few, and not favourable for the development of commerce. There is no *Railway* in the country, and only about 920 m. of *Telegraphic Lines*.

GOVERNMENT, RELIGION, AND EDUCATION.—Servia is a constitutional and hereditary Monarchy. The *Executive Power* is represented by the chief of the State. The *Legislative Power* is exercised by the Prince and the National Assembly together. The *Religion* of the State is that of the Orthodox Greek Church, but there is freedom for all other religions. *Education* is gratuitous and compulsory, but is not in a very satisfactory condition.

MONTENEGRO.

PHYSICAL GEOGRAPHY.

Latitude. Between 42° and 43° 20' N. *Longitude.* Between 18° 25' and 20° 15' E.
Area. 3,640 sq. m.

POSITION AND BOUNDARIES.—Montenegro lies on the E. coast of the Adriatic. It is bounded on the

N.W. by Herzegovina. N.E. by the Turkish Sandjak Novi Bazar. S.E. by Albania. S.W. by the Adriatic and Austria.

COASTS.—By the “Berlin Treaty” (1878), the port of Antivari and its seaboard were annexed to Montenegro.

SURFACE.—The surface of the country is mountainous, being covered by numerous ramifications of the Dinaric Alps. Its general aspect is that of a succession of elevated ridges, diversified here and there by a lofty mountain peak—*Kom* (7,995 feet) in the S.E. being the highest—and in some parts looking like a sea of immense waves which have been suddenly petrified.

DRAINAGE.—Though very well watered, Montenegro contains no river of any importance.

The *Moratschai*, the largest Montenegrin river, drains the centre of the country, and falls into Lake Scutari near its N.E. extremity. The *Zeta*, the river *par excellence* of Montenegro, has no known outlet, but appears to lose itself among the complication of defiles through which it flows.

Obs. The N.W. portion of *Lake Scutari* now belongs to Montenegro, having been added, with other Albanian territory, by the “Treaty of Berlin.”

CLIMATE AND PRODUCTIONS.—The *Climate* is healthy, but the *Soil* is neither fertile nor efficiently cultivated. The chief *Products* are maize, potatoes, olives, tobacco, honey, wax, and timber.

PEOPLE AND LANGUAGE.—In 1878 the *Population* numbered 286,000, the bulk of whom are Slavs of the Servian branch. The Montenegrins are hardy, robust, and brave; but ignorant, superstitious, and barbarous. Their *Language* is a pure dialect of the Slavonic family.

POLITICAL GEOGRAPHY.

POLITICAL DIVISIONS.—Montenegro is divided into 8 *Nahias* or *Districts*. The *Nahias* are divided into *Tribes*, the tribes into *Families*. Some of the territory recently acquired has not yet been organised.

NOTES ON THE TOWNS.—The capital of the country is *Cettigne*, a village of 1,400 inhabitants. *Antivari*, the recently acquired seaport, has 8,000 inhabitants. *Podgoritza* (6,000), and *Nikshich* (4,000), are the other chief towns of the Principality.

INDUSTRIES AND COMMUNICATIONS.—The *Industries* of Montenegro are almost confined to *Agriculture*, *Cattle-rearing*, and *Fishing*. *Roads* can hardly be said to exist; and what traffic there is between the different parts of the country is in commodities which are borne by women, mules, and asses.

GOVERNMENT, RELIGION, AND EDUCATION.—The *Government* is an *Absolute Monarchy*: but the *Senate* (16 members) and the Skuptchina have much influence over the decisions of the Prince (Hospodar). The bulk of the people belong to the *Greek Church*. There are, however, a few *Mohammedans*. *Education* can hardly be said to exist.

GREECE.¹

PHYSICAL GEOGRAPHY.

Latitude. Between 35° 49' and 39° 17' N. *Longitude.* Between 19° 18' and 26° 13' E.
Area. 19,347 sq. m.

POSITION AND BOUNDARIES.—Greece lies in S. Europe, and occupies the S. part of the Balkan Peninsula. It is bounded on the

N. by Turkey. E. by the *Ægean Sea*. S. by the *Mediterranean*. W. by the *Ionian Sea*.

COASTS.—The coasts of Greece are so broken up into peninsulas and gulfs that irregularity of outline and great extent of coastline—about 2,000 m., or 1 m. of coast to 10 sq. m. of area—are characteristic features of the physical geography of this country. The chief coast features are the

1. **Capes**, Colonna,² and Skyli,² on the E.; Malia,² Matapan,² and Gallo,² on the S.; Kalogria, on the W.
2. **Inlets**, the Gulfs of Zeitoun or Lamia, Petali, Athens or *Ægina*, Nauplia or Argolis, on the E.; Kolokythia or Marathonisi, Kalamata or Koron, on the S.; Arkadia, Patras, Lepanto or Corinth, and Arta, on the W.

Obs. These numerous and, in many cases, deep inlets afford great facilities for commerce, and compensate, to a large extent, for the absence of navigable rivers.

3. **Straits**, Trikeri, Orei, Talanta, and Egripo, between the mainland and the island of Eubœa (Negropont, or Egripo) on the E.; Cervi, between the mainland and the island Cerigo, on the S.; and Corfu, between the mainland and Corfu, on the W.

ISLANDS.—These are very numerous, and form what is known as “*Insular Greece*.” They are arranged in four groups, which are known, respectively, as 1. The *Ionian Isles*. 2. The *Cyclades*. 3. The *Western Sporades*. 4. *Eubœa* and the *Northern Sporades*.

¹ Greece, or *Græcia*, is the name which the Romans gave to the country, but its origin is uncertain. The Greeks themselves had no general geographical name for the territory which they occupied. The term “*Hellas*,” the nearest approach to such general name, was applied

to any territory occupied by the “*Hellenes*,” wherever that might be.

² These capes terminate, respectively, the peninsulas of *Attica*, *Argolis*, *Monembasia*, *Maima*, and *Messenia*.

Obs. 1. The Ionian Islands¹ lie in the Ionian Sea, N.W., W., and S.E. of the mainland. They have an area of 1,006 sq. m., are mountainous, rugged, and fairly well wooded, and have deeply indented coasts. They consist of 7 large islands (Corfu, Paxo, Santa Maura or Leucadia, Ithaca, Cephalonia, Zante, and Cerigo), and several small ones. The climate is temperate, but variable; and the chief natural productions are the olive and grape—whence the famous oil, wines, and currants of these islands—oranges, citrons, and grain. Population, 218,879.

Obs. 2. The Cyclades (so called from their encircling the holy island Delos) lie E. of the Morea. Generally speaking, they are elevated and rocky, but fairly fertile. They are very numerous, but the principal islands are Andro, Tino, Naxia, Paro, Syra, Thermia, Zea, Sipheno, and Delos. The climate is insular; and the natural productions include oil, wine, fruits, silk, cotton, and marble. Population, 123,299.

Obs. 3. The Western Sporades lie W. of the Cyclades, in the Gulf of Athens, and off the Argolic peninsula. The chief of them are Kuluri (anc. *Salamis*), Ægina, Poro, Hydra, and Spezzia. They are for the most part mountainous, rocky, and barren. Kuluri, and Ægina have some fertile districts which yield oil, wine, and cotton.

Obs. 4. Eubœa and the N. Sporades.

a. **Eubœa** (called also "Egripo" and "Negropont"), the largest of the Greek islands, lies off the E. coast of N. Greece. It is 115 m. long, and has an average breadth of 15 m. The area is given as 1,700 sq. m.; the population, at more than 72,000 souls. The island is mountainous on the E. side, but in other parts the soil is of extraordinary fertility. Corn, wine, cattle, sheep, goats, wool, pitch, and turpentine, are the chief natural products.

b. The **Northern Sporades** lie N.E. and E. of the island Eubœa. The chief of them are Kilidromi, Skiatho, Skopelo, and Skyro. The last two are the most fertile, and produce oil, wine, oranges, figs, honey, and madder.

SURFACE.—Rugged mountains, deep and close valleys, wooded hills, and miniature plains constitute, with general irregularity of outline, the distinctive features of the geography of Greece. The chief surface features are the

1. **Mountains**, which form the most prominent feature of the country. They are as follows:—

DIVISIONS.	MOUNTAINS.	POSITION AND DIRECTION.	GREEK SUMMITS.	
			NAMES.	HEIGHT IN FEET.
SOUTHERN NORTHERN GREECE. ²	Othrys	{ Running E. between Greece and Turkey from the Pindus Mountains to the sea	Gerakovuni	5,670
			Guiona	8,241
	Parnassus	{ Running S.E., and stretching, under the names Helicon, Cithæron, and Parnes, to the Channel of Egripo }	Lykeri	8,259
	Erymanthus ..	{ Running N.E. and S.W. at the W. end of Cyllene	Olenos	7,297
	Taigetus	{ Running S. through Central Morea, and terminating in Cape Matapan }	St. Elias ..	7,904

Obs. 1. No summit in Greece reaches the line of perpetual snow.

Obs. 2. Mt. Œta, at its E. extremity, forms, with the Gulf of Zeitoun, the famous pass of Thermopylæ³ (once the "key of Greece"), which led from Thessaly to

¹ These islands were restored to Greece by Great Britain in March, 1864.

² Northern Greece is now called "Roumelia." It is sometimes called also "Hellas," from *Hellas* proper, which it includes; and sometimes "Livadia," because it was formerly a Turkish province of that name.

³ Southern Greece is called the "Morea," a word of doubtful origin. Its ancient name was "Peloponnesus."

⁴ Especially famous for the devoted defence of Leonidas and his 300 Spartans against the hosts of Xerxes, B.C. 480.

Locris. At its narrowest part, called the "Western Gate," only a single carriage could pass. Recent geological changes have quite altered the character of the place.

2. **Plains**, which are few in number and small in size, owing to the generally mountainous character of the country; but they are very fertile and form the chief producing tracts in Greece. The most important of them are the

a. Plain of Marathon, on the N.E. coast of Attica. It is about 6 m. long, and from 1 to 3 m. broad, and is famous as the scene of the great battle between the Persians and Athenians, B.C. 490.

b. The Double Plain of Mantinea and Tegea in Arcadia. This central region of the Morea was a great battlefield of the ancient Greeks, and was rendered especially famous by the death of Epaminondas the Theban general, B.C. 362.

Obs. There are also the *Plains of Attica, Copäis, Ætolia, and Elis.*

DRAINAGE.—The limits of the country are too confined to admit of the formation of large rivers; and therefore, as might be expected, the streams are short, of small volume, and in no instance navigable. The chief draining agents to be noticed are the

1. **Rivers**, which flow

a. Eastward towards the Ægean Sea, viz., the *Hellada* which rises in Mt. Typhrestus and flows into the Gulf of Zeitoun; *Mavronero*, which rises in Mt. Guiona, and flows into the Lake Topolias; and *Oropo*, which falls into the Strait of Euripo.

b. Southwards into the Mediterranean, viz., the *Iri*, which rises in Mt. Taygetus and flows into the Gulf of Marathonisi; and the *Pirnatza*, which rises in the Mt. Elæon and flows into the Gulf of Koron.

c. Westwards into the Ionian Sea, viz., the *Rufia*, which is the largest river in the Morea; it rises in the mountains of Megalopolis, drains the central highland, traverses the plain of Elis, and falls into the Gulf of Arcadia; and the *Aspropotamo*, which rises in the S. slopes of Mt. Lacmon, has nearly half its course in Turkey, and flows S.W. into the Ionian Sea. It is the chief river of Northern Greece.

2. **Lakes**, which are numerous, but small. The best known of them is

Topolias, in Bœotia. It receives the Cephissus and other streams, and is drained into the Talanta Strait by several subterranean streams. In the summer months it is reduced to a reedy and pestiferous swamp.

CLIMATE.—Continental Greece enjoys a temperate, and generally salubrious climate. The mountain districts are cold and bleak; but at Athens the heat is often excessive. Summer lasts three months in the year, during which time the sun is radiant, the sky clear, and the atmosphere bright and transparent. Spring is a wet and, often, a stormy season.

PRODUCTIONS.—The principal *Products* are corn, oil, wine, figs, currants, tobacco, silk, flax, cotton, and madder. *Forests* are still left, and yield excellent timber for ship-building: and from the neighbouring seas come valuable *sponges*. Greece is known to be rich in *Minerals*; but only *marble, mill-stones, and building-stones* are worked to any profitable extent.

PEOPLE AND LANGUAGES.—The *Population* in 1879 was 1,679,775, three-fourths of whom are *Greeks*, and the remainder *Albanians* and *Foreigners*. All these, except a few Albanians and Turks, speak Modern Greek.

POLITICAL GEOGRAPHY.

POLITICAL DIVISIONS.—For administrative purposes the kingdom of Greece is divided into 13 *Nomarchies* (governments). The Great Divisions, *Nomarchies*, and chief towns are as follows :—

GREAT DIVISIONS.	NOMARCHIES.	TOWNS.	
		CAPITALS.	OTHER TOWNS.
I. NORTHERN GREECE, OR HELLAS	1. ATTICA AND BEOTIA ..	Athens	{ Piræus, Thebes, Livadia.
	2. PHOCIS AND PHTHIOTIS	Zeitoun	Salona, Talanta.
	3. ACARNANIA & ÆTOLIA.	Mesolonghi	Lepanto, Vonitza.
	4. ARGOLIS AND CORINTH	Nauplia	Corinth, Argos.
	5. ACHAIA AND ELIS	Patras	Gastrini, Pyrgos.
II. SOUTHERN GREECE, OR MOREA	6. ARKADIA	Tripolitza	Megalopolis.
	7. MFSSENIA	Calamata	{ Arkadia, Nava-rino.
	8. LACONIA	Sparta	Mistra.
	9. EUBCEA	Chalcis	Karysto, Kastro.
	10. CYCLADES	Hermopolis (Syra)	{ Andros, Tinos, Naxos.
III. INSULAR GREECE	11. CORFU	Corfu	
	12. ZANTE	Zante	
	13. CEPHALONIA	Argostoli	

NOTES ON THE TOWNS.—The five most populous towns are *Athens* (44,510), *Syra* (20, 996), *Patras* (19,641), *Zante* (17,516), and *Corfu* (16,452).

Obs. **Athens**, the metropolis, lies in the central plain of Attica, about 5 m. from the Gulf of Athens. With respect to classical associations it is one of the most famous cities in the world. The remains of its former splendour are numerous, and most of them are in a good state of preservation; they include the Temples of Theseus, of the Winds, of Victory; the remains of the Temple of Olympian Zeus, of the Parthenon, of the Erechtheum, of Hadrian's Arch, and of the Propylæa. The University, founded in 1836, is the finest of the modern buildings. A railway connects Athens with Piræus, its port.

The chief **ports** are *Piræus*, the port of Athens, *Patras*, *Zante*, *Syra*, *Nauplia*, and *Corfu*.

Other notable towns are *Argos*, reputed to be the oldest city in Greece, *Livadia*, the capital of N. Greece under the Turks, *Mesolonghi*, the burial place of Lord Byron, and *Navarino*, where the Turkish fleet was destroyed by the allied fleets of England, France, and Russia (A. D. 1827).

INDUSTRIES.—A very important industry of Greece is its *Commerce*, which employs large numbers of the people: half the people are occupied in *Agricultural pursuits*, particularly in the cultivation of currants, olives, figs, cotton, and tobacco: *Manufactures* are few and of but little importance.

Obs. The chief **exports** are currants, lead, and olive oil; *imports*, cotton and woollen goods, coal, iron, sugar, and hides.

COMMUNICATIONS.—Most of the trade is carried on by *Sea*, inland traffic being impossible to any extent for want of *Roads*. The sole *Railway* in the kingdom, that between Athens and the Piræus, is only about 7 m. long, but there is a good *Telegraphic service*.

GOVERNMENT, RELIGION, AND EDUCATION.—In the constitution of Greece, the *legislative* power is vested in a single Chamber of *Deputies*; the *executive* power is vested in the king and a ministry

consisting of the heads of the seven chief departments of state. The *Religion* is Christianity, and nearly all the people are attached to the Greek Church. *Education* is fostered by the State and is carried on in four grades of schools, viz., the "Commercial" and the "Ancient Greek" schools, the "Gymnasia," and the "University of Athens."

RUSSIA.

PHYSICAL GEOGRAPHY.

Latitude. Between 38° 55' and 70° N. *Longitude.* Between 17° 50' and 66° 20' E.

Area. 2,271,024 sq. m.

This area includes Transcaucasia and the Asiatic parts of Orenburg and Perm.

POSITION AND BOUNDARIES.—Russia lies in the E. of Europe. It is bounded on the

N. by Norway and the Arctic Ocean. E. by East Russia. S. by the Caspian, Persia, Turkey, the Black Sea, Roumania, and Austria. W. by Prussia, the Baltic, and Sweden.

COASTS.—The coasts of Russia belong to four different seas, viz., the Arctic, Caspian, Black, and Baltic Seas, and have an estimated length of 5,514 m.

Obs. Owing to the ice by which they are encumbered, the Arctic ports are closed to navigation 6 months, and those on the Baltic 4 months every year.

The chief coast features are the

1. **Capes**, Sviatoi, Kanin, Ruski, and Medinski on the N.; Chersonese, and Eupatoria, S.W. of the Crimea, in the Black Sea, on the S.
2. **Inlets**, Petchora Bay, the White Sea, Tcheskaia Bay, and the Varanger Fjord, on the N.; the Gulfs of Bothnia, Finland, and Riga, on the W.; the Gulf of Perekop, and the sea of Azov, on the S.

Obs. 1. The **White Sea**, a huge gulf of the Arctic Ocean, which penetrates the N. shores of Russia between Capes Kanin and Sviatoi, extends S. and S.W. nearly 400 m. inland, and has an estimated area of about 45,000 sq. m. It is deep and navigable for large vessels. It receives several great rivers, and abounds in fish. Its chief port is Archangel. For six months of the year the White Sea is frozen over, and it is said to owe its name to its appearance during this season.

Obs. 2. The **Gulf of Finland**, an E. arm of the Baltic, is 260 m. long, and from 25 to 90 m. broad. Its waters are usually frozen from October to May. St. Petersburg stands at the E. extremity of the Gulf.

Obs. 3. **Sea or Gulf of Azov** (so called from the river of that name, which flows into it) lies on the N. shore of the Black Sea, and is connected with it by the Strait of Kertch or Yenikale. Its area is upwards of 13,000 sq. m. Its waters are of great importance to Russian commerce, much of the produce of Siberia being sent through them by the Don. It is frozen up from November to March.

3. **Straits**, viz., the Jugorsche Strait, in the Arctic Ocean, between the mainland and the island Waigatz; and the Strait of Yenikale or Kertch, which connects the Black Sea with the Sea of Azov.

ISLANDS.—Appertaining to, or claimed by, European Russia are Waigatz, Novaia Zemlia, Kolguev, and Spitzbergen, in the Arctic Ocean; Aland Isles, Dago, Osel, and a large number of islets in the Baltic Sea.

SURFACE.—Russia comprises a large portion of the "Great Plain" of Europe, and is, with some trifling exceptions, nearly flat.

On the S.E. frontier of this country lies the highest ground and the culminating summits of Europe; but the most elevated district in the interior, the Valdai plateau, nowhere exceeds 1200 ft., and is really nothing more than a small region of undulating ground. Boundless forests, frozen moss-covered marshland ("tundra"), and great treeless plains ("steppes") constitute the most characteristic features of the surface of European Russia. Of the

1. **Mountains and Hills** the most notable are the

a. Caucasus Mts., which extend S.E. from the N. shores of the Black Sea to the W. shores of the Caspian, a distance of 750 m. The chain has its culminating point, *Elbruz* (18,571 ft.), in the central part. The highest portions of the system are covered with perpetual snow, and the slopes in many parts are clothed with magnificent forests. These mountains enclose many fertile valleys, and are rich in minerals. The only *pass* across them which is practicable for carriages is the *Dariel*, a military road leading from *Mozdok* on the N. to *Tiflis*, on the S. side.

b. Ural Mountains which run from N. to S. by W. on the E. frontier of Europe, and form a vast region of undulating country of low elevation. They separate the basins of the *Volga* and *Obi*, and contain the sources of many other rivers. Their highest point is *Töhl Pass*, (5,544 ft.). They are crossed by a good carriage-road which leads from *Perm* to *Ekaterinburg*.

c. Valdai Hills which consist of a succession of low plateaux in W. Russia and form the chief water-parting of Russia.

2. **Plateaux**.—Although the whole of Russia belongs to the great plain of Europe, or the "Sarmatian Plain," it includes within its area some definitely marked variations of level. There may be named here the

a. Finland or Olonetz Plateau, which lies between the Gulf of Bothnia and the White Sea, and is chiefly remarkable for the vast number of Lakes which are scattered over its surface.

b. Uralo-Baltic Plateau, which stretches from the Baltic to the Ural Mountains, and embraces the Valdai Hills.

c. Uralo-Carpathian Plateau, which traverses the countries from W. to E. between the Carpathians and the S. end of the Ural Mountains.

DRAINAGE.—Russia lies in four maritime basins which slope, respectively, N., towards the Arctic Ocean; W., towards the Baltic; S., towards the Black Sea; and S.E., towards the Caspian. The chief draining agents are the

1. **Rivers**¹ which flow down the

a. N. Slope, towards the Arctic Ocean, viz., the *Petchora*, *Mezen*, *Dwina Onega*, and *Wym*; the last four emptying their waters into the White Sea.

b. W. Slope, towards the Baltic, viz., the *Kemi*, and *Ulea*, into the Gulf of Bothnia; the *Neva*, into the Gulf of Finland; the *Düna*, into the Gulf of Riga; the *Niemen*, and *Vistula*.

c. S. Slope, into the Black Sea, viz., the *Dniester*, *Bug*, *Dnieper*, *Don*, and *Kuban*.

d. S.E. Slope, into the Caspian, viz., the *Kura*, *Terek*, *Volga*, and *Ural*.

Obs. 1. The *Petchora* rises in the Ural Mountains, and after a N.W. course of 1,120 m.—the lower 700 m. of which are navigable—flows into the Arctic by a large estuary which is full of islands. Its *tributaries* are the *Ussa*, on the right bank, and the *Ishma*, and *Zylma* on the left bank.

Obs. 2. The *Dwina*, formed by the union of the *Vychegda*, and *Suchona*, flows,

¹ Russian rivers rise at such low elevations that their long courses are sluggish and favourable to navigation; but their commercial importance is

greatly reduced in that they are icebound for several months in the year.

after a N.W. course of 790 m.—almost all navigable—into the White Sea through the Gulf of Archangel. Its chief *tributaries* are the Waga, and Pinega.

Obs. 3. The **Neva**, though only 40 m. long, is one of the most important rivers of Russia, because it flows through the metropolis and forms the chief outlet for the commerce of the interior of N. Russia. It issues from the S.W. corner of Lake Ladoga, and flows rapidly W. to the Gulf of Finland. It is, however, usually frozen over from October to April.

Obs. 4. The **Niemen** or **Memel**, a river of W. Russia, rises in the Government Minsk, flows N.W. over a course of 493 m., and falls into the Kurische-Haff. It is navigable almost to its source, and forms the main outlet for the trade of Lithuania and Volhynia.

Obs. 5. The **Vistula** (pp. 20, 89, 101).

Obs. 6. The **Dnieper**, the third river of Europe as to size, rises in the Government of Smolensk, flows S., S.E., and S.W., and falls, after a course of 1272 m., into the Black Sea. It drains an *area* of 195,500 sq. m., and has for its chief *tributaries* the Beresina, and Pripet, on the right; and the Desna, on the left.

Obs. 7. The **Don** comes next, in point of size, to the Dnieper, and is the *fourth* river of Europe. It rises in the Government Tula, and after a S. and S.W. course of 1,185 m., falls into the Sea of Azov by several mouths. It drains an *area* of 176,500 sq. m., and has for its chief *tributaries* the Donetz, on the right; the Choper, and Medvietza, on the left.

Obs. 8. The **Volga**, the *largest river in Europe*, rises on the Valdai Plateau, flows E. and S. over a course of 2,130 m., and falls into the Caspian Sea, near the town of Astrakhan, by 60 or 70 mouths. It drains an *area* of 527,000 sq. m., and has for its chief *tributaries* the Oka, and Sura, on the right; the Mologa, Cheksna, Kama, and Samara on the left.

Obs. 9. The **Ural**, which is next in length to the Don, rises in the Ural Mountains, and after a S.W. and S. course of 1,309 m., falls by several mouths into the N. of the Caspian Sea. It drains an *area* of 85,000 sq. m.

2. **Lakes.** Russia possesses two great lake regions, viz., one in the N.W., and the other in the S.E. The most important lakes are in the N.W., and lie E. of the Gulf of Finland. They are—

a. *Ladoga*, the most extensive collection of fresh water in Europe, which lies a few miles E. of the head of the Gulf of Finland. Its greatest *length*, from N.E. to S.W., is nearly 125 m., its greatest *breadth* about 70 m., its *area* 8781 sq. m., and its *elevation* above the sea, 49 feet. It receives 60 rivers, the chief of which is the Swir that connects Ladoga with Onega, and is drained by the Neva.

b. *Onega*, the second in size of the European lakes, lies midway between the White Sea and Ladoga. It is about 140 m. *long*, from 30 to 40 m. *broad*, 4,856 sq. m. in *extent*, and lies at an *elevation* of 237 ft. above the sea. It receives 10 rivers, and discharges its surplus waters through the Swir, into Ladoga.

Obs. 1. Other large lakes in the N.W. region are *Peipus*, between the Gulfs of Finland and Riga, *Saima*, and *Sego*, between the Gulf of Bothnia and the White Sea; *Bieloe*, and *Ilmen*, S.E. and S. respectively of Ladoga.

CLIMATE.—Russia experiences various climates, in consequence of its vast extent. These, though cold and inhospitable, are generally not insalubrious. The *Arctic plains* are the coldest regions, having a temperature almost always below freezing point. The *Steppe Region* in the S.E. is subject to the greatest extremes of heat and cold, the thermometer rising, in summer, to 100° Fahr., while in winter it not unfrequently descends to -36° Fahr. The belt of country between these regions has a *mean annual temperature* of from 32° to 40° Fahr. The *rainfall* is small, not averaging more than from 15 to 20 inches, even on the Baltic shores where it is greatest.

PRODUCTIONS.—The *Natural Productions* of Russia are varied and

valuable. The most characteristic of them are grain, flax, hemp ; timber, iron, gold, platinum, fish, and salt.

PEOPLE, AND LANGUAGES.—The *Population*¹ is estimated at 79,832,926, and consists chiefly of Slavonians, Lithuanians, Finns, Tartars, and Jews. The majority of the people speak one or other of the three Russian dialects, viz., *Pure Russian*, spoken in Moscow and all the central provinces ; *Malo-Russian*, spoken in the S.E. provinces ; and *White Russian*, spoken in Western Russia.

POLITICAL GEOGRAPHY.

POLITICAL DIVISIONS.—The political limits of W. Russia stretch beyond the physical boundaries of Europe, both on the E. and on the S.E., including the Asiatic portions of the governments of Perm and Orenburg on the E., and the Lieutenancy of Caucasia on the S.E. For administrative purposes the country is divided into 72 *governments* and 8 *districts*, divisions which are, for the most part, named after their chief towns.² It is customary to give these under certain great divisions, which are partly geographical and partly ethnological in character.

GREAT DIVISIONS.	GOVERNMENTS AND TOWNS.
I. FINLAND (8 Districts.)	{ 1. Abo. 2. Kuopio. 3. Nyland (<i>Helsingfors</i>). 4. St. Michel. 5. Tavastehus. 6. Uleaborg. 7. Wasa. 8. Wiborg.
II. GREAT RUSSIA (Muscovy.)	{ 9. Archangel. 10. Jaroslav. 11. Kaluga. 12. Kostroma. 13. Kursk. 14. Moscow. 15. Nijni-Novgorod. 16. Novgorod. 17. Olonetz (<i>Petrozavodsk</i>). 18. Orel. 19. Pskov. 20. Riazan. 21. Smolensk. 22. Tambov. 23. Tula. 24. Tver. 25. Vladimir. 26. Vologda. 27. Voronezh.
III. BALTIC PROVINCES..	{ 28. Courland (<i>Mitau</i>). 29. Esthonia (<i>Revel</i>). 30. Livonia (<i>Riga</i>). 31. St. Petersburg.
IV. WEST RUSSIA..... (Polish Russia.)	{ 32. Grodno. 33. Kovno. 34. Minsk. 35. Mohileff. 36. Podolia (<i>Kaminiets</i>). 37. Vilna. 38. Vitebsk. 39. Volhynia (<i>Jitomir</i>).
V. POLAND (Vistula Provinces.)	{ 40. Kalisch. 41. Kielce. 42. Lomza. 43. Lublin. 44. Petrikau. 45. Plock. 46. Radom. 47. Siedlce. 48. Suwalki. 49. Warsaw.
VI. SOUTH RUSSIA (New Russia.)	{ 50. Bessarabia (<i>Kishenau</i>). 51. Don Cossacks (<i>Novo-Tcherkask</i>). 52. Ekaterinoslav. 53. Kherson. 54. Taurida (<i>Simferopol</i>).
VII. LITTLE RUSSIA..... (Ukraine.)	{ 55. Kharkov. 56. Kiev. 57. Poltava. 58. Tchernigov.
VIII. EAST RUSSIA..... (Kazan.)	{ 59. Astrakhan. 60. Kazan. 61. Orenburg. 62. Penza. 63. Perm. 64. Samara. 65. Saratov. 66. Simbirsk. 67. Ufa. 68. Viatka.
IX. CIS-CAUCASIA	{ 69. Kuban (<i>Ekaterinoslav</i>). 70. Stavropol. 71. Ter (<i>Vladikavkas</i>).
X. TRANS-CAUCASIA	{ 72. Baku. 73. Daghestan (<i>Derbend</i>). 74. Elizabethpol. 75. Erivan. 76. Kutais. 77. Soukum. 78. Black Sea District. 79. Tiflis. 80. Sakatal.

¹ Up to 1863 the bulk of the Russians were serfs, the absolute property of the Crown, the nobles, or other private persons. An imperial decree, dated 1 March, 1861, and coming into final execution in 1863, abolished serfdom throughout

the Empire. By this decree upwards of 44 millions of peasants received their freedom.

² When the name of the *chief town* differs from that of the *government* it is added in brackets.

NOTES ON THE TOWNS.—The seven most populous towns are *St. Petersburg* (667,963), *Moscow* (601,969), *Warsaw* (308,548), *Odessa* (184,819), *Kiev* (127,251), *Riga* (103,000), *Kishenau* (102,427).

Obs. 1. **St. Petersburg** (so named from Peter the Great, who founded it A.D. 1703), on the River Neva, at the head of the Gulf of Finland, is the metropolis of the Empire, and one of the most magnificent cities in Europe. Its "Winter Palace" is said to be the largest and most sumptuous structure of the kind in the world. The streets are broad and regular, and the squares large and spacious. It is the chief seaport in the Empire, one of the Russian university towns, and a most active centre of commerce and manufactures. Its port is frozen up, in common with all the Baltic ports, from the end of November to the beginning of May.

The **university towns** are *St. Petersburg*, *Moscow*, *Kiev*, *Kazan*, *Kharkov*, *Dorpat*, *Helsingfors*, and *Odessa*.

The **chief seaports** are, 1. *Commercial*—*St. Petersburg*, *Riga*, *Windau*, *Narva*, *Pernau*, and *Revel* in the Baltic; *Archangel*, and *Onega*, in the White Sea; *Odessa*, *Taganrog*, *Berdiansk*, and *Kertch*, in the Black Sea; *Astrakhan* and *Baku*, in the Caspian. 2. *Naval*—*Kronstadt*, and *Sveaborg*, in the Baltic; and *Nikolaiev*, in the Black Sea.

The **mining centres** of Russia are *Ekaterinburg*, beyond the Ural Mts., *Perm*, *Jeletz*, *Viza*, and *Murom*.

The **chief industrial centres** are *St. Petersburg*, *Moscow* (silks, cottons, woollens, jewelry, commerce, &c.), *Warsaw* (linens, woollens, hosiery, leather, &c.), *Nijni-Novgorod* (fairs), *Ekaterinburg*, and *Perm* (mining), *Astrakhan* (caviar, isinglass, shagreen, &c.), *Orenburg* (transit trade).

Other **notable places** are *Sebastopol* (formerly the "Gibraltar of Russia"), *Kiev* (the former capital, the "Jerusalem of the North," the "mother of Russian towns"), *Kazan* (former capital of a Tartar kingdom to which the Russians were long tributaries), and *Novgorod* (where Rurik founded the Russian Empire in 862 A.D.)

INDUSTRIES.—The vast majority of the people are engaged in *Agriculture* and *Cattle-rearing*. *Mining* and *Metallurgic operations* are carried on upon a vast scale. *Manufactures* include cotton and woollen goods, linens, leather, wooden articles, machinery, and agricultural implements. *Fishing*, *Lumbering*, and *Transit Trade* are also important branches of Russian industry.

COMMUNICATIONS.—The *Great Roads* of the Empire are kept in excellent condition; the *Smaller Roads* are bad. In winter sleighing is in great vogue. *Water communication* intersects the country in every direction; and *Railways*, and *Telegraph wires* traverse all important parts.

GOVERNMENT, RELIGION, AND EDUCATION.—The *Government* is an absolute hereditary monarchy. The *Religion* of five-sixths of the people is Greek Catholicism. Roman Catholics, Jews, Protestants, and Mohammedans also find religious toleration. *Education* is improving, but it is still in a very defective condition.

ASIA.¹

PHYSICAL GEOGRAPHY.

Latitude. Between 1° 15' and 78° N.

Longitude. Between 26° and 190° E.

Area, estimated at 17,303,608 sq. m., or about a *third* of the whole land surface.

Obs. Asia consists of the N.E., and largest, division of the Old World, and extends over 164° of longitude, and 76° of latitude. This continent exhibits some characteristics of physical geography which claim the student's close attention.

1. *Squareness and massiveness of form*, notwithstanding the numerous peninsulas which project from the E.; S.; and S.W. sides.
2. *Vastness of extent*, being 7000 m. long, and 5000 m. broad.
3. *Its number of large islands and island-chains.*
4. *Its extensive land-locked seas.*
5. *Its great inland seas, lakes, and rivers.*
6. *Its immense proportions of mountainous and highland surface.*
7. *The great distance of its central parts from the sea.*
8. *Its several instances of twin rivers.*

Asia, moreover, excites especial interest as comprising the cradle of the human race, the seats of the most ancient and mightiest empires,² and the scenes of the Divine life of the world's Redeemer.

POSITION AND BOUNDARIES.—Asia constitutes the N.E. portion of the Old World. It is bounded on the

N. by the Arctic Ocean. E. and S.E. by the Pacific Ocean. S. by the Indian Ocean. W. by the Red Sea, Africa, Mediterranean, Black Sea, Caspian, and Europe.

Obs. Africa is connected with Asia by the *Isthmus of Suez*, which stretches from the Mediterranean to the Red Sea, a distance of 70 m. The isthmus is now traversed by the "Suez Canal" which joins these two seas.

COASTS.—On the E. and S. the coasts are very irregular, being deeply penetrated by great arms of the Pacific and Indian Oceans; but on the N. they are more regular and iron-bound. The entire extent of *Coastline* has been estimated at 35,886 m. or 1 m. of coast to every 482 sq. m. of area. The chief

1. **Capes** are Tcheliuskine or North East, and Sviatoi, on the N.; Cape East, Lopatka, and S.W. Cape, on the E.; Kamboia, Romania, Negrais, Comorin, and Ras-el-Had, on the S.; Baba, on the W.

Obs. The *extreme points* of Continental Asia are Cape Tcheliuskine, on the N.; East Cape, on the E.; Cape Baba, on the W.; and Cape Romania, on the S.

2. **Inlets** are the Bays of Obi, Borchaja, Jana, and Tschau, on the N.; the Gulf of Anadir, the Bays of Ghijinsk, and Penjinsk, in the Sea of Okhotsk; the Gulfs of Leaotong, and Pechili, in the Yellow Sea; and the Gulf of Tonquin, in the China Sea, on the E.; the Gulfs of Siam, Martaban, Bengal, Kambay, and Kach; the Sea of Oman, and the Persian Gulf, on the S.; and the Gulf of Suez, at the head of the Red Sea, on the W.

¹ The origin of the name "Asia" is involved in great obscurity. It was, however, probably derived from a Hebrew or Assyrian root, which signifies the "east or rising Sun," and was once used to imply "the East" generally. It is not improbable that the term had, at first, but a

local application, and that its more extended signification has been of gradual growth.

² Those, viz., of Assyria, Babylon and Persia; the Empire of Alexander the Great, and the Empire of the Mongolian Tartars.

3. **Straits** are, Long Strait, between the mainland and Wrangel Land, on the N.; Behring Strait, between Asia and America, on the N.E.; La Perouse, between the islands Saghalin and Yezo; the Corea Strait, between the Corea and the S. islands of Japan; Fokien Strait, between S.E. China and Formosa, on the E.; the Strait of Malacca, between the Malay peninsula and Sumatra; Palk Strait, between Hindustan and Ceylon; the Strait of Ormuz, between Persia and Arabia; and the Strait of Bab-el-Mandeb, between Arabia and Africa, on the S.

ISLANDS.—The islands, island groups, and island chains of Asia are very numerous and important. The chief of them are

The *Liakov*, or *New Siberian Group*, off the N. coast, in the Arctic Ocean. The *Kurile Chain*, which stretches from Kamtschatka to Yezo, and shuts in the Sea of Okhotsk; *Saghalin*, which stretches between the Seas of Okhotsk and Japan; the *Japanese Islands*—Yezo, Nipon, Shikoku, and Kiushiu,—which shut in the Sea of Japan; the *Chinese Islands*, a long chain of small islands, of which the Loo Choo, and Majieo-Sima groups are the chief, stretching from Japan to Formosa, and shutting in the Chinese Sea; and *Formosa*, in the Pacific, off the E. coast. *Hainan*, at the entrance of the Gulf of Tonquin; and *Malaysia*,¹—including the Philippine Group, the Moluccas, the Celebes, Borneo, and the Sunda Islands,—off the E. coast. The *Nicobar Islands*, the *Andaman Islands*, *Ramri*, and *Ceylon*, in the Bay of Bengal; the *Maldivé Islands*, *Laccadive Islands*, *Kuria Muria Islands*, and *Moseirah*, in the Arabian Sea; off the S. coast. *Cyprus*, in the Levant; and the *Asiatic Sporades*, in the *Ægean Sea*; off the W. coast.

SURFACE.—The natural features of this continent are on a scale of unparalleled grandeur, and varied by the most striking contrasts. They comprise the loftiest elevations upon earth together with the lowest depressions; the most majestic highland plateaux together with the dreariest lowland plains; the most fertile, smiling, and romantic tracts, together with the largest, most arid, and most unproductive wastes. The *highlands* are massed about the centre and follow the parallels from W. to E., while the *lowlands* lie in the N. and in the districts bordering on the Oceans. The chief

1. **Mountains** are the

a. *Himalayas (Abode of Snow)*, which stretch from the Pamir Plateau on the W. to the gorge of the Brahmaputra on the E., and from the plains of India on the S. to the Plateau of Tibet on the N.—a distance of more than 500 m.—and form the most gigantic mountain system in the world. Their mean height is about 16,000 ft., but they embrace more than 40 peaks, which are above 23,000 ft. high. **Mt. Everest**, the loftiest peak in Asia, and in the world, is 29,002 ft. The system is traversed from N. to S. by many *Passes*.

b. *Kuen Lun*, which stretch E. from the Pamir Plateau to an unknown distance. They buttress the lofty plateau of Tibet on the N., have a mean elevation of 20,000 ft., and embrace many lofty summits of more than 22,000 ft. high.

c. *Thian Shan* or *Celestial Mts.*, which rise from the N.E. part of the Pamir Plateau, and extend some 2000 m. Eastward. In the W. they consist of numerous ranges which bear different names; in the E. they have not been thoroughly explored. *Tengri Khan* (21,000 ft.) is their loftiest summit.

d. *Hindu Kush*, which is a great mountain tract, branching W. from the

¹ The great Archipelago which stretches S. from 19° N. lat. to 11° S. lat., has been erected by geographers into a separate geographical region called "Malaysia," or the "Indian Archipelago,"

S.W. corner of the Pamir Plateau, and terminating near the 68th meridian. It forms the *water parting* between the valleys of the Indus and Oxus, but is very imperfectly known throughout much of its extent. Some of its peaks are known to be 20,000 ft. high.

Obs. Other Asiatic mountains are the *Taurus Mts.*, in Asia Minor; the *Karakoram*, and *Altai Mts.*, in Central Asia; the *Yun-ling*, *Nan-ling*, *Pe-ling*, and *Ching-an Mts.*, in China; the *Yablonoi*, and *Stanovoi Mts.* in E. Siberia. For some account of these, and other Asiatic mountains, see the countries to which they respectively belong.

2. Tablelands or Plateaux.—The mighty highland mass that forms the focus of the principal mountains of Asia is, as might naturally be expected, the centre about which the chief plateaux also are grouped. This great nucleus and its surrounding highlands are the

a. Pamir Plateau, which, as yet, has been but partially explored. By those who have most recently visited it, it is said to consist of a series of broad elevated valleys, along which run the traversing routes. It is also called the *Bam-i-Duniyah*, or "roof of the world." Its *length*, from N. to S., is about 180 m., and its *breadth*, from E. to W., about 100 m. On the N., E., and S., it is enclosed by gigantic mountain ranges, while its *mean elevation* may be from 12,000 to 14,000 ft. This huge highland mass divides the waters which flow E. from those which flow W., and constitutes the most formidable barrier between China and W. Asia.

b. The Plateau of Tibet embraces the vast highland region which lies between the Himalayan and Kuen Lun Mountains. Neither its *extent* nor its *mean elevation* is accurately known, but in its S.W. regions it is thought to be between 15,000 and 17,000 feet high. The plateau contains numerous lakes, and gives birth to many of the chief Asiatic rivers.

c. The Gobi or Shamo or Sea of Sand, lies between the Kuen Lun and Thian Shan Mts., and extends from W. to N.E. Its limits, however, in these directions are not precisely defined. The interior of the desert in its W. extension is indented by the valley of the Tarim, which stretches from Lake Lob westward for about 1000 m. The plateau has a *mean elevation* of about 3000 ft. It contains many brackish lakes, and its soil is, in places, much impregnated with salt.

d. The Plateau of Iran, which stretches W. from the S.W. of the Pamir Plateau to the valley of the Tigris, and occupies the greater part of Afghanistan, Baluchistan, and Persia. It is of moderate elevation and, in its E. part, has the appearance of a series of elevated flat-bottomed valleys, bounded by bleak and bare spurs; in the W. the general aspect of this plateau is that of a series of sterile plains separated from one another by lofty and barren mountains.

Obs. In addition to the above, Asia includes the plateaux of *Mandchuria*, *Deccan*, *Malwa*, *Armenia*, *Anatolia*, *Arabia*, &c., which are all described under the countries in which they lie.

3. Plains, which are of vast extent, and grouped about the highlands. They are included chiefly in Russia, China, British India, Arabia, and Turkey, and are therefore *described* under those countries. The largest of them are the—

a. Plain of Siberia, which slopes gently down from the Altai Mts. to the Arctic Ocean. *b. Maritime Plain of China*, which lies about the lower courses of the Hoang-Ho, and Yang-tsze-Kiang. *c. Plain of the Ganges*, in N.E. Hindustan. *d. Plain of the Indus*, in N.W. Hindustan. *e. Plain of Euphrates and Tigris*, which stretches from the Armenian highlands to the head of the Persian Gulf.

DRAINAGE.—The drainage of Asia is of two kinds, viz., *Oceanic* and *Continental*. The *Oceanic* portion is about equally distributed to the Arctic, Pacific, and Indian Oceans: that which belongs to

the Atlantic basin is the very limited amount which flows into the Black and Mediterranean Seas. The *Continental* system includes the rivers of the great central highlands, which flow either into the vast lakes, or inland seas, that lie upon, or near, those highlands, or are exhausted by systems of irrigation. The chief draining agents are the

1. **Rivers**, which belong to the

a. *Oceanic System*, and include those flowing down the

a. *Northern Slope*, into the Arctic Ocean, viz., the Obi, Yenisei, Lena, Jana, Indigirka, and Kolyma.

b. *Eastern Slope*, into the Pacific, viz., the Amur, Hoang-Ho, Yang-tse-Kiang, and Si-Kiang.

c. *Southern Slope*, into the

1. Pacific, viz., the Me Khong or Kambodia, and Me Nam.

2. Indian Ocean, viz., the Irawadi, Brahmaputra, Ganges, Indus and Shat-el-Arab.

b. *Continental System*, and include those flowing into the

a. Aral Sea, viz., the Sir Daria or Jaxartes, and Amu Daria or Oxus.

b. Lob Nor, viz., the Tarim, or Ergu.

c. Hamu or Sistan Lake, viz., the Helmand.

d. Caspian, viz., the Atrek.

Obs. The principal Asiatic rivers are described under the countries to which they chiefly belong.

2. **Lakes**, which are almost exclusively lakes of "reception" and the waters of which are mostly salt, or brackish. They are grouped as

a. *Lowland Lakes*, the chief of which are the Caspian Sea, Aral Sea, Dead Sea, Lake Balkash, and Lake Sistan or the Hamu.

b. *Highland Lakes*, the chief of which are, Issik-Kul, Sarikol or Victoria, Kara-Kul, Baikal (a fresh water lake), Lob Nor, Tengri Nor, and Koko Nor.

CLIMATE.—Asia extends from the neighbourhood of the equator to the neighbourhood of the pole, and exhibits every variety of climate. The country, broadly speaking, is divided by the disposition of the mountain ranges into three broad belts, in each of which there prevails a climate more or less normal, *e.g.*, that of the

1. *Southern Region*, which lies south of the Himalayas, is *tropical*, having for its characteristics, intense heat in summer; absence of winter; excessive rainfall at certain seasons; and long droughts, mitigated only by copious dewfalls, at other seasons.
2. *Central Region*, which includes the highlands of Central Asia, N. of the Himalayas, together with the plains that border them on the E. and W. and is *sub-Arctic* and dry.
3. *Northern Region*, which lies N. of the Altai Mts. is rigorously *Arctic*. Hard winter prevails for nine months together; the ground in various parts is permanently frozen to a great depth, and the rivers are free from ice for only short periods of the year.

PRODUCTIONS.—Asia is the mother country of all the most important *Cereals*, of many of the best *Fruits*, and of some of the choicest *Flowers* that are now grown in Europe. From Asia come also all our *Domestic Animals*, except the sheep, and all our *Domestic Poultry*, except the Guinea hen and turkey. Nowhere do *Vegetable Productions* attain to greater perfection than in S. Asia, and nowhere do they exhibit greater beauty and variety. Asia yields also the noblest

types of *Animal Life*, and has many of them peculiar to herself. Her *Mineral Wealth* has been but partially explored, but it is known to be immense, and to comprise several of the most precious stones and metals, and most of the useful metals and minerals.

Obs. The *chief productions* are specially named under the countries to which they more particularly belong.

PEOPLE.—The *Population* of Asia, estimated at 831,000,000, numerically exceeds that of all the other parts of the world put together. It probably includes all the great races¹ of the human family, but its most important constituents are *Caucasians*²—who form about two-fifths of the whole people, and occupy all that portion of the country S. of a line extending from the W. shore of the Black Sea to the head of the Bay of Bengal—and *Mongolians*³—who form the bulk of the remaining three fifths of the people, and inhabit northern, central, eastern, and south-eastern Asia.

Obs. The *Malayans*,⁴ who amount to about a quarter of a million, and occupy the Malay Archipelago, belong rather to the oceanic division of the world.

LANGUAGES.—There is great variety in the languages spoken by Asiatics, but as yet the linguistic varieties have been but imperfectly classified. Roughly speaking they embrace the

1. *Inflecting Class*, which is represented by the languages of India, Arabia, Armenia, Persia and Caucasia.
2. *Agglutinative Class*, as the languages spoken by the Tartar tribes, the Asiatic Finns, the Tunguses, Kalmucks, and others.
3. *Isolating Class*, e.g. the languages of China, Indo-China, Tibet, Japan, &c.

RELIGIONS.—The prevailing *Creeds* in Asia are those of *Mohammed*, *Brahma*, *Buddha*, and *Confucius*. *Mohammedanism* has its headquarters in those countries which lie to the W. and S.W. of the Pamir Plateau. *Brahminism* flourishes chiefly in Hindustan; *Buddhism*, in Indo-China, and, with *Confucianism*, throughout the Chinese and Japanese Empires. *Christianity* is professed in Asiatic Russia, and tolerated in Turkey. Asia is the birthplace of all these religions.

POLITICAL DIVISIONS.—These are—I. EASTERN OR ASIATIC RUSSIA. II. ASIATIC TURKEY. III. ARABIA. IV. PERSIA. V. AFGHANISTAN. VI. BALUCHISTAN. VII. HINDUSTAN. VIII. FURTHER INDIA. IX. CHINA. X. TURKESTAN. XI. JAPAN.

Obs. 1. *Further India* includes *British Burma*, *Burma*, *Siam*, *Annam* or *Cochin China*, *French Cochin China*, *Kambodia*, *Independent Malacca*, and the *Straits Settlements*.

Obs. 2. *Turkestan* includes the Khanates of *Khiva* and *Bokhara*.

¹ The principal races of men are often reduced to three; viz., 1. The Caucasian, White, Indo-European, or Iranian Race. 2. The Mongolian, Yellow, or Tartar Race. 3. The Ethiopian, or Black Race. The Malays are sometimes added as a fourth, and distinct race.

² *Caucasians* are characterised by their well-shaped head, regular features, fine hair, and symmetrical form. The handsomest and most

intellectual portion of mankind belong to this race.

³ *Mongolians* have for distinguishing features, broad skulls, high cheek-bones, small black eyes obliquely set, long black hair, and a yellow or saw olive complexion.

⁴ *Malayans* have flat faces, obliquely set eyes, long coarse black hair, and a brown complexion of skin.

EASTERN RUSSIA ; OR, SIBERIA¹ AND CENTRAL ASIA.

PHYSICAL GEOGRAPHY.

Latitude. Between 37° 20' and 78° N.E. *Longitude.* Between 50° E. and 170° W.
Area. Estimated at 6,128,019 sq. m., or considerably more than that of Europe.

POSITION AND BOUNDARIES.—Eastern Russia occupies all the N.E. portion of the Old World. It is bounded on the

N. by the Arctic Ocean ; E. by Behring Strait, Behring Sea, Sea of Okhotsk, and Gulf of Tartary ; S. by China, Ferghana, Bokhara, Kiva, and Persia ; W. by the Caspian Sea, and Europe.

Obs. 1. **Behring Strait**, so called from a Dane, Vitus Behring,² who discovered it in 1728, connects the Arctic and Pacific Oceans, and separates Asia from America in those parts where they approach one another most nearly. It is 36 m. wide in its narrowest part, and is generally shallow. Usually it is frozen over from November to April.

Obs. 2. **Behring Sea** lies between the peninsulas of Kamtschatka (on the W.), and Alaska (on the E.), the Aleutian Isles (on the S.), and Behring Strait, and is the northernmost part of the N. Pacific Ocean. It is upwards of 1,600 m. long.

COASTS.—The rigour of the climate keeps the Siberian coasts ice-bound and inaccessible during the greater part of the year. Their chief

1. **Capes** are Taimyr, Tcheliuskine or North East, Sviatoi, Skelagskoi, on the N.; East Cape, and Lopatka, on the E.
2. **Inlets** are the Gulfs of Obi, Yenesei, and Taimyr, and the Bays of Borchaja, Jana, and Tschau, on the N.; the Gulf of Anadir; the Bay of Olyutorski; the Bays of Ghijinsk, Penjinsk, and Amur, in the Sea of Okhotsk; and the Tartary Gulf in the Sea of Japan, on the E.

Obs. 1. The **Gulf of Obi**, is the estuary of the river Obi. It is 400 m. long, and from 70 to 80 m. wide. It is generally frozen over from October to June.

Obs. 2. The **Gulf of Yenisei** is the estuary of the river Yenisei. It is 200 m. long, and about 20 m. wide. It is frozen over from October to May.

3. **Straits**, viz., *Behring Strait* (see above, *Obs. 1*), and the *Kurile Strait*, which connects Behring Sea with the Sea of Okhotsk, and runs between Cape Lopatka and the Kurile chain of Islands.

ISLANDS.—The most important Asiatic Islands belonging to Russia are the Lena Archipelago, and the Liakov or New Siberia Islands, off the N. coast ; St. Lawrence, the Aleutian Chain, Behring Island, the Kurile Chain, and Saghalin, off the E. coast.

Obs. 1. The **Liakov Islands** are so called from M. Liakov, their discoverer. They lie in the Arctic Ocean, off the N. coast of Siberia, and compose a group of four large islands, and several small ones. They are valuable solely for the *fossil ivory* which is found there in great profusion.

Obs. 2. The **Kurile Islands** are about 25 in number, and contain several active volcanoes. They compose a chain which stretches from the peninsula of Kamtschatka to Yezo. The *population* is scanty, and lives chiefly by hunting and fishing. These islands now belong to Japan. See *Obs. 3*, p. 127.

¹ *Siberia*, is said to derive its name from *Sibir*, the capital of an old Mongol settlement on the banks of the Irtysh.

² *Vitus Behring* was in the service of Russia, and made a coasting voyage from Kamtschatka

northward in 1728. It is not known whether he ever passed East Cape. The information, however, which we possess of the strait is chiefly derived from our own countrymen, Captains Cook and Beecher.

Obs. 3. **Saghalin**, at its nearest point, is 4 m. distant from the mainland. Its area is 1,065 sq. m. It is of volcanic origin, mountainous, and yields timber and coal. It is peopled by about 13,000 inhabitants, about half of whom are natives, and half Russian and Japanese settlers. The principal exports are fish, furs, timber, and coal. Saghalin now belongs to Russia, Japan having ceded, A.D. 1875, her portion of it in exchange for the Russian part of the Kurile Islands.

SURFACE.—This portion of the Russian Empire consists, for the most part, of a vast plain which extends from the Arctic Ocean towards the S. and W., imperceptibly rising as it approaches the Altai Mountains to an elevation of some 1,200 feet. The chief

1. **Mountains**, are the

a. *Thian Shan* or *Celestial Mts.* (see p. 122.)

b. *Kharli Tau Mts.*, which trend W. from the N.W. corner of the Pamir Plateau, and consist of a broad belt of parallel ranges, which separate the waters of the Kizil Su from those of the Jaxartes. They culminate in *Mt. Schurof* (19,000 ft.) and embrace numerous peaks 12,000 ft. high.

c. *Altai Mts.*—A vast and complicated system which occupies the whole country between the Upper Irtysh and the Selenga—which flows into Lake Baikal—consists of numerous ranges bearing different names, and culminates in *Mt. Bielucha*¹ (about 11,000 ft.) near the W. extremity of the mass.

d. *Yablonoi Mts.* appear to be nothing more than an undulating plateau, which extends N.E. from the Selenga, between the valleys of the Lena and the Amur.

e. *Stanovoi Mts.* extend N.E. from the Yablonoi Plateau to Behring Strait. The mountains which traverse Kamtschatka are a spur of the Stanovoi. They probably nowhere exceed 2,000 or 3,000 ft. in height.

Obs. The mountains of Siberia are but very imperfectly known.

2. **Plateau** is *Ust-Urt*, a rocky and all but desert waste between the Caspian and Aral Seas. It is 240 m. long, 160 m. broad, and lies at a mean elevation of about 6,000 ft. above the Caspian.

3. **Plains** are the

a. *Siberian Plain*, a low-lying diluvial tract which occupies nearly the whole country. A broad belt stretching S. from the Arctic Ocean, consists of desolate irreclaimable swamps called "Tundras," which are almost always frozen. S. of this portion stretch immense pastures and extensive tracts of dense forests.

b. *Tau²-Kum³*, which lie between the Ili, and Chu rivers.

c. *Ak⁴-Kum*, S.W. of the Chu and between it and the Kara Tau Mts.

d. *Kara⁵-Kum*, which extend W. from the Sari Su to to the Aral Sea.

e. *Desert of Kizil-Kum*, which is enclosed by the Aral Sea and the rivers Amu Daria, and Sir Daria.

f. The *Steppes*, a series of rough plains which extend N.E. from the region between the Aral and Caspian Seas. Consisting of immense tracts of whitish sand or reddish clay, the general aspect of the steppes is monotonous and forbidding in the extreme. They are varied, here and there, with scanty shrubs, long rank grass, salt marshes, and reed thickets; but they are absolutely destitute of trees.

DRAINAGE.—The drainage of Siberia, like that of the whole continent, is *Oceanic* and *Continental*. The rivers of Siberia are amongst the largest and slowest in the world. The principal draining agents are the

¹ *Mt. Bielucha*—"White Mountain."

² *Tau*—"a mountain."

³ *Kum*—"sands."

⁴ *Ak*—"white."

⁵ *Kara*—"black."

⁶ *Kizil*—"red."

1. **Rivers**, which belong to the

a. Oceanic System, and include those flowing down the

a. N. slope, into the Arctic Ocean, viz., the Obi, Yenisei, Olensk, Lena, Jana, Indigirka, and Kolyma.

b. E. slope, into the Pacific Ocean, viz., the Anadir, and Amur.

b. Continental System, and include those flowing into the

a. Aral Sea, viz., the Amu Daria (Oxus), and Sir Daria (Jaxartes).

b. Issik Kul, viz., the Chu.

c. Balkash Lake, viz., the Ili, Karatal, Ak-su, and Lepsa.

Obs. 1. The **Obi** has its remotest sources in the Ektag Altai Mts., flows N.W. and N., and after a course of more than 2,000 m., reaches the Arctic Ocean through the Gulf of Obi. Its chief *tributary* is the Irtysh,¹ which, enlarged by the affluents Ishim and Tobol, it receives on its left bank.

Obs. 2. The **Yenisei**, above 3,000 m. long, rises among the S. spurs of the Altai Mts., flows N. by W. and enters the Arctic Ocean through the Gulf of Yenisei. Its chief *tributaries* are the Upper, Middle, and Lower Tunguskas.

Obs. 3. The **Amur** or **Amoor**, the most important river in N. Asia, is the only natural highway which connects the central Steppes of Asia with the rest of the world. It is formed by the union of the Shilka and the Argun—called in its upper course the Kerulen—which rise in the Kentei Mts., S. of Lake Baikal. It flows over an E. and N.E. course of 2,280 m., and after receiving on its right bank the *tributaries* Sungari and Usuri, falls into the Gulf of Amur, at the N. end of the Gulf of Tartary.

Obs. 4. The **Amu Daria** (Oxus), from its remotest sources on the Pamir Plateau flows W. and N.W. over a course of some 1,400 m. to the Aral Sea, which it enters by many mouths. It is said to be navigable from the Aral Sea to the frontiers of Afghanistan.

2. **Lakes**, which are large and numerous. The most important of them are the

a. Caspian, which lies in the S.W. between E. and W. Russia. It is the largest inland sea in the world, having an *area* of 178,866 sq. m., and lies in a depression which is 84 ft. below the level of the Black Sea. It receives 84 streams besides the Volga, and has no outlet; its level, therefore, is maintained solely by evaporation. Its waters are salt, but less so than those of the ocean, from the prodigious quantity of fresh water which it receives.

b. Aral Sea, which lies E. of the Caspian, has an *area* of about 27,000 sq. m.; its *elevation* is 33 ft. above the level of the sea, and 117 ft. above the Caspian. Its waters are brackish and very shallow along the E. and S. shores. The Russians have placed upon it a small fleet of steamers. It receives the Sir Daria, the Amu Daria, and many other streams; but it has no visible outlet.

c. Balkash, which lies between the parallels 45° and 47° N. lat., extends over an *area* of 11,500 sq. m. Its waters are salt and bitter, although it receives the Ili, Karatal, Ak-Su, Lepsa, and many other large rivers.

d. Issik-Kul (Warm Lake), which lies in a broad basin at the S. foot of the Trans Ili Ala Tau Mts., at an *elevation* of 4,540 ft. It is 2,468 sq. m. in *extent*, and although it receives 40 streams its waters are salt.

e. Baikal, which lies among the N. ridges of the Altai system. It is the largest collection of fresh water in Asia, its *area* being about 13,287 sq. m. It receives many rivers, the chief of which are the Selenga and the upper Angara. Its surplus waters are carried into the river Yenisei by the lower Angara.

Obs. Of smaller lakes there are between the Caspian and Lake Baikal great numbers.

CLIMATE.—Although nearly the whole of E. Russia lies within the N. Temperate Zone, the prevailing climate is exceedingly ungenial. The open plains between the Arctic Ocean and the Altai

¹ The Irtysh is the largest limb of this great river, and ought therefore, according to the ordinary principles of river nomenclature, to have given its name to the main stream.

Mountains are swept with fury by the icy winds from the Polar regions, while they are shut out completely from the warm S. winds by the huge barrier of mountains and plateaux of Central Asia. The result is that for nine months of the year the cold is so intense that it is no uncommon thing for the mercury to freeze and remain solid for months together. The short *summers*, however, are remarkable for their great heat, and for the rapidity with which vegetation springs up, grows, and matures.

PRODUCTIONS.—The *Animal* and *Mineral* resources of E. Russia are almost illimitable. The *Vegetable Products* are less important.

Domestic Animals comprise the reindeer¹ and camel²; *Wild Animals* include the white and brown bear, wolf, beaver, ermine, marten, minx, sable, and sea-otter.³

Vegetables and *Fruits* are not grown to perfection in E. Russia, but there is in some of the mountainous districts much timber.

The chief *Minerals* are precious stones, gold, silver, platinum, iron, copper, lead, zinc, salt, mica, &c., &c.

PEOPLE AND LANGUAGES.—The *population* is about 8,000,000, of whom nearly half are exiles and convicts from W. Russia. The remainder is made up of Kirghiz hordes, who wander about in the S. W.; Ostiaks, who occupy the lower valleys of the Obi and Yenisei; Samoiedes, on the Arctic shores; and Kamtschatdalis, in Kamtschatka. The *Languages* belong to the Russian branch of the Slavonian, or to the Turanian family, and include Tungusic, Mongolic, Turkic, and Samoiedic.

POLITICAL GEOGRAPHY.

POLITICAL DIVISIONS.—Eastern or Asiatic Russia is divided into two great sections, viz.,—I. SIBERIA. II. CENTRAL ASIA, each of which is divided into 8 *Governments*, which with their chief towns are shown in the following table.

Obs. The Capitals of the Governments are in Italics.

I. SIBERIA.		II. CENTRAL ASIA.	
GOVERNMENTS.	CHIEF TOWNS.	GOVERNMENTS.	CHIEF TOWNS.
1. Tobolsk.....	<i>Tobolsk</i> , Omsk, Tiumen.	1. Semiretchenak	<i>Vernoje</i> , Kopal.
2. Tomsk.....	<i>Tomsk</i> , Barnaul.	2. Kuldja.....	<i>Kuldja</i> .
3. Yeniseisk....	<i>Yeniseisk</i> , Minusinsk.	3. Sir-Daria.....	<i>Tashkend</i> , Khojend.
4. Irkutsk.....	<i>Irkutsk</i> , Balagansk.	4. Zarafshan.....	<i>Samarkand</i> .
5. Transbaikal..	<i>Nertchinsk</i> , Kiakhta.	5. Amu-Daria.....	<i>Kiptschak</i> .
6. Yakutsk....	<i>Yakutsk</i> , Urtjusk.	6. Ferghana.....	<i>Kokand</i> .
7. Amur Prov...	<i>Blagoweschtschensk</i> .	7. Turgai.....	<i>Turgai</i> .
8. Maritime do..	<i>Nicolajewsk</i> .	8. Trans-Caspian (Ter.)	<i>Krasnovodsk</i> .

¹ The Rein-Deer in N. Siberia supplies the place of the horse, sheep, goat, and camel to the inhabitants. Large herds also run wild.

² The Camel is not found further N. than

Lake Baikal. Even there its size is much diminished.

³ All these are valuable fur-bearing animals.

NOTES ON THE TOWNS.—The three most populous towns are *Tashkend* (78,165); *Khojend* (45,000); and *Samarkand* (25,000).

The great trading centres are *Tashkend*, *Samarkand*, *Khojend*, *Kiakhta*, *Yakutsk*, and *Tomsk*.

The chief mining centres are *Ekaterinburg* (Ural), *Barnaul* (Altai), and *Nertchinsk* (Transbaikal).

The principal manufacturing centres are *Tiumen* (soap, woollen fabrics, leather, coarse carpets, mats, and carriages), and *Irkutsk*, capital of Siberia (glass, leather, soap, &c.)

Other noteworthy towns are *Tobolsk*, the capital of Central Asia or W. Siberia, *Omsk*, the virtual capital of W. Siberia, and *Petropaulovski*, a strong fortress on the coast of Kamtschatka.

INDUSTRIES.—These embrace *Cattle-rearing*, *Commerce*, *Mining*, *Manufactures*, and *Fishing*.

Obs. The chief exports are furs, hides, wool, leather, firearms, toys, and spirits; imports, tea, silk, porcelain, paper, &c.

COMMUNICATIONS.—*Rivers* are much used for the transport of goods. The *Roads* are, to a large extent, mere caravan tracts. The *Sleigh*, during the winter months, affords the chief means of transit. *Telegraphic communication* exists between Europe, and all the principal Siberian towns.

GOVERNMENT, RELIGION, AND EDUCATION.—E. Russia is under *Military Governors* appointed by the Czar. The chief *Religions* are Mohammedanism in the W., and Buddhism in the E. There are also a few Christians, who belong to the Greek Church. *Education* is here at the lowest ebb.

ASIATIC TURKEY.

PHYSICAL GEOGRAPHY.

Latitude. Between 12° 40' and 42° N. *Longitude.* Between 26° and 48° E.

Area. 729,473 sq. m. (including *Hedjaz* and *Yemen* in Arabia, which the Turks claim as conquests.)

POSITION AND BOUNDARIES.—Asiatic Turkey lies in the extreme W. of Asia. It is bounded on the

N. by the Dardanelles, the Sea of Marmara, and the Black Sea. E. by Russia, Persia, and Arabia. S. by the Persian Gulf, and Arabia. W. by the Red Sea, Africa, and the Mediterranean.

COASTS.—These belong to five different seas, and are almost everywhere bold and rocky. On the N. and S. W. there are few inlets or good harbours; but in the S., W., and N. W., the indentations are deep and the harbours excellent. The chief

1. **Capes**, are Halys or Babira, Injeh, and Baba, on the N.; Baba, and Krio, on the W.; Kelidonia, Anamur, and Karatash, on the S.
2. **Inlets**, are, the Gulfs of Edremid, Sandarlik, Smyrna, Scala Nova, Mendelia, Adalia, and Iskenderun, on the shores of Asia Minor; the Bay of Acre, on the Syrian coast; and the Gulfs of Suez, and Akaba, at the head of the Red Sea.
3. **Straits and Channels**, viz., the Bosphorus, which connects the Black Sea

and the Sea of Marmara (see p. 17, Obs. 3); the Dardanelles, between the Sea of Marmara and the Mediterranean, and the Strait of Bab-el-Mandeb, which leads from the Gulf of Aden to the Red Sea.

ISLANDS.—These are very numerous, and many of them of great historical celebrity. The most important of them are Cyprus, Rhodes, Kos, Patmos, Samos, Nikaria, Khios, Mitylene, Tenedos, Imbros, and Marmara; all of which, except the first and last named, lie in the E. part of the Archipelago, and belong to the "Asiatic Sporades."

Obs. 1. Cyprus,¹ the largest of the islands of Asiatic Turkey, lies near the N.E. corner of the Mediterranean, about 60 m. from the Syrian shores. It has an area of 3,682 sq. m., and a population estimated at 144,000, of which about two-thirds are Greeks and one-third Turks. Its principal products and its chief exports are wheat, barley, carobs (locust beans), salt, cotton, wine, oil, silk, and madder. The principal manufactures are silks, stuffs, and leather. The most important towns are *Nikosia* or *Leukosia*, the capital; and *Famagusta*, *Larnaka* and *Limasol*, on the E.; and S. coasts.

Obs. 2. Rhodes—termed "the pearl of the Levant"—the most E. island of the Ægean Sea, lies about 12 m. from the coast of Asia Minor. It has an area of 420 sq. m. The population is estimated at 30,000, the greater part being Greeks, the rest Turks and Jews. The products—honey, wax, madder, corn, wine, oil, oranges, and other fruits—are both limited in quantity and of inferior quality. Excellent timber grows on the mountains, and valuable fish, coral, and sponges abound in the surrounding seas. The capital is *Rhodes*, a strongly fortified city and seaport at the N.E. extremity of the island, with a population of 10,000.

SURFACE.—The N.; N.E.; and W.; districts of Asiatic Turkey consist of mountainous highlands. In the E. lie the rich alluvial plains of the Tigris and Euphrates; the S. includes a portion of the great Desert of Syria; while the S.W. includes the W. extension of the Arabian desert. The main surface features to be observed are the

1. **Mountains**, which cover a large proportion of the country. The chief of them are the

a. *Taurus System*, which, stretching W. from the banks of the Samantia and trending parallel to the shores of the Mediterranean, covers the S. regions of Asia Minor. It consists of many ranges, which are distinguished by local names, and sends its ramifications to the shores of the Archipelago. It embraces many lofty summits, but culminates in *Metdesis* (11,404 ft.), in the Bulghar Dagh range.

b. *Anti Taurus*, a N.E. continuation of Taurus, lying mainly between the rivers Samantia and Euphrates, and culminating in *Kermes Dagh* (10,496 ft.), which lies E. of the Saron river.

c. *Libanus* (White) *Range*, which runs N.E. and S.W., between Coelesyria and the Levant, and culminates in *Mt. Chodib* (10,061 ft.), near the N. extremity.

d. *Anti Libanus*, which lies E. of and generally parallel with Libanus. The range includes three summits of upwards of 8,000 ft. high. The highest point, *Great Hermon* (9,058 ft.), is near the S. extremity of the chain.

e. *Mts. of the Sinaitic Peninsula*, which lie between the Gulfs of Suez and Akaba, include numerous lofty summits, one of which, *Jebel Musa*, is reputed to be *Mt. Sinai*.

f. *Armenian Mts.*, which diverge in many ranges from the great mass of *Agri Tagh*² or *Ararat* (17,112 ft.) on the frontiers of Turkey, Russia and Persia. The chief ranges run S.E. along the frontier of Kurdistan; N.W. to

¹ Cyprus was ceded to England by Turkey on the 4th June, 1878.

² *Agri Tagh* (= "the painful mountain") is so called from the toilsomeness of its ascent. The

Armenians call it *Masis*; the Persians, *Ak Dagh*; and the Turks, *Kah-i-Nuh* (= "Noah's mountain.")

the Black Sea; and W. to meet the outliers of Anti Taurus. Many of the Armenian Mountains are capped with snow.

2. **Plateaux**, which occupy large areas of N.E.; N.W.; and W. Turkey. The chief of them are the

- a. *Plateau of Anatolia* or *Asia Minor*, a broad belt of country which stretches N.W. from the Taurus Mountains, and lies at an elevation of 3,000 ft. above the sea.

- b. *Plateau of Armenia*, which lies in N.E. Turkey, has a mean elevation of 7,000 ft., and culminates in the peaks of Ararat. It is much broken by glens and valleys.

- c. *Syrian Desert*, which stretches W. from the plain of the Euphrates to the highlands of Palestine.

3. **Plains**, which occupy the greater portion of the S.E. and S.W. parts of Asiatic Turkey. The chief of them are the

- a. *Plain of Euphrates*, which stretches from the Armenian Mts., in the N., to the Persian Gulf in the S., and from the Zagros Mts. in the E. to the Arabian and Syrian deserts in the W. The most fertile portion of this great plain is that between the Euphrates and Tigris—the classical Mesopotamia.

- b. *Plain of Hauran*, between the Jordan and the Syrian desert.

- c. *Plain of Sharon*, along the W. coast of Syria.

- d. *Plain of Esdraelon*, between the Jordan and the river Kishon.

DRAINAGE.—The drainage system of Asiatic Turkey partakes of the general character of Asiatic drainage, being both *Oceanic* and *Continental*. The chief draining agents are the

1. **Rivers**, which belong to the

- a. *Oceanic System*, and include those flowing into the

- a. *Persian Gulf*, viz., the Shat-el-Arab, which is formed by the Euphrates and Tigris.

- b. *Black Sea*, viz., the Tchoruk, Yesil Irmak, Kizil Irmak, and Sakaria.

- c. *Archipelago*, viz., the Gedis, and Mendereh.

- d. *Mediterranean*, viz., the Sihun, and Tihan.

- b. *Continental System*, and include the Jordan, which flows into the Dead Sea, and others.

Obs. 1. The **Euphrates** (=“the good and abounding river”), is the longest, largest, and by far the most important river of W. Asia. It is formed by the union of two streams, the *N. and S. Euphrates*, which rise among the mountains of Armenia. Its general course is W., S., and S.E. It is above 1,600 m. long, and is navigable for 1,200 m. Its chief *tributaries* are the Tokhma, on the right bank, and the Khabur on the left bank. The Euphrates, owing to the melting of the snows on the Armenian highlands, is annually inundated in the month of May.

Obs. 2. The **Tigris** rises near the channel of the S. Euphrates. It flows S.; E.; and S.E.; and after a course of 1,146 m. joins the Euphrates. Its chief *tributaries* are the Great and Little Zab and the Diyaleh, all on the left bank. The Tigris is navigable for steamers, but the old-fashioned rafts still keep their ground.

Obs. 3. The **Jordan** (*Descender*) is formed by the union of the N. Banias, which rises on the S. slopes of Mt. Hermon, and the Hasbany, which rises among the S.W. slopes of Anti-Libanus. It flows S. by a tortuous course, until after traversing about 200 m. of route in passing over its one degree of latitude, it falls into the Dead Sea at its N. extremity. Its chief *tributaries* are the Jarmouk, and the Jabbok, on the left bank.

Lakes.—Of the many lakes of Asiatic Turkey the best known are the

- a. *Lake Van*, on the Armenian plateau near the N.E. frontier, which has an area of 1,200 sq. m. and lies at an elevation of 5,000 ft. above the sea. It has no outlet, and very little inflow, and its water is bitter and very salt.

- b. *Dead Sea*,¹ which lies in S.W. Syria, in a depression 1,308 ft. below the

¹ The Biblical names of this Lake are “The Salt Sea,” “The Sea of the Plain,” “The East Sea,” and “The Sea.”

level of the sea. It receives several rivers, but has no visible outlet. Its waters are clear and transparent, but very salt and bitter to the taste.

c. *Sea of Galilee*,¹ which lies in the N. valley of the Jordan, and both receives and emits that river. It lies 620 ft. below the level of the sea, but the water is sweet and transparent.

Obs. Other Turkish lakes are *Merom*, the *Great Salt Lake*, *Ateibeh*, *Hijaneh*, *Bala*, &c., on the W. edge of the Syrian desert, near Damascus, and *Beyshehr*, *Egerdir*, *Isnik*, &c., on the plateau of Anatolia.

CLIMATE.—Asiatic Turkey, stretching through 30° of lat., and possessing every variety of elevation, depression, exposure, and soil, experiences, necessarily, almost every variety of climate. The Highlands of the interior are exposed to excessive cold in *winter*; and the plains and valleys, to intense and desolating heat in *summer*. On the whole, however, no country is naturally more salubrious.

PRODUCTIONS.—The natural productions of Turkey are of great value and variety.

1. *Animals* include the camel, mule, ass, ostrich, and leech.
2. *Vegetables* comprise maize and rice; bananas and dates; opium and gums; timber and dye-stuffs.
3. *Minerals* embrace silver, copper, lead, iron and coal, salt, asphalt, and meerschaum.

PEOPLE AND LANGUAGES.—The *Population* of Asiatic Turkey is estimated at 17,536,465, and includes Turks, Druses, Arabs, Circassians, Tartars, Khurds, Armenians, Greeks, Syrians, Chaldeans, and Jews. *Turkish* is the language of the Court and of literature; but various other tongues and dialects are in common use.

POLITICAL GEOGRAPHY.

POLITICAL DIVISIONS.—The old and best known divisions of Turkey are partly historical and partly territorial. But the actual administrative divisions are *Vilayets*, of which there are 19. These are subdivided into *Sandjaks*, or Provinces. Both divisions are given in the following table.

OLD DIVISIONS.	VILAYETS.		OLD DIVISIONS.	VILAYETS.	
	NAMES.	CAPITALS.		NAMES.	CAPITALS.
I. ASIA MINOR..	1. <i>Brussa</i> ..	<i>Brussa</i> .	II. ARMENIA AND KURDISTAN....	11. <i>Erzeroum</i> ..	<i>Erzeroum</i> .
	2. <i>Aidin</i>	<i>Smyrna</i> .		12. <i>Diarbekir</i> ..	<i>Diarbekir</i> .
	3. <i>Konia</i> ..	<i>Konia</i> .		13. <i>Van</i>	<i>Van</i> .
	4. <i>Angora</i> ..	<i>Angora</i> .	III. SYRIA ..	14. <i>Aleppo</i> ..	<i>Aleppo</i> .
	5. <i>Castamouni</i> ..	<i>Castamouni</i> .		15. <i>Lebanon</i> ..	<i>Deir el Kamar</i> .
	6. <i>Adana</i> ..	<i>Adana</i> .	IV. MESOPOTAMIA ..	16. <i>Syria</i> ..	<i>Damascus & Beyrout</i> .
	7. <i>Sivas</i>	<i>Sivas</i> .		17. <i>Bagdad</i> ..	<i>Bagdad</i> .
	8. <i>Trebizond</i> ..	<i>Trebizond</i> .	V. ARABISTAN	18. <i>Hedjaz</i> ..	<i>Jiddah</i> .
	9. <i>Archipelago</i> ..	<i>Rhodes</i> .		19. <i>Yemen</i> ..	<i>Mocha</i> .
	10. <i>Cyprus</i> ..	<i>Leukosia</i> .			

¹ Called also "The Sea of Gennesaret," and "The Sea of Chinnereth." This lake is illus-

trious from its intimate connection with the events of Our Saviour's public life.

Obs. Aden, on the S. coast of Yemen, is a large and strongly fortified town and seaport, which has belonged to Great Britain since 1839. As a key to the Indian Ocean, and as the coaling station of the steamers from Europe to the East, it is a place of vast importance. Its population is 30,000.

NOTES ON THE TOWNS.—The six most populous towns are *Smyrna* (150,000), *Damascus* (150,000), *Aleppo* (70,000), *Beyrout* (60,000), *Brussa* (60,000), and *Erzeroum* (60,000).

Obs. Jerusalem, one of the most ancient and certainly the most interesting city in the world, lies about 18 m. N.W. of the Dead Sea, and is surrounded on all sides, except the N., by deep valleys. The walls are about two and a half miles in circumference, and the city contains a stationary population of some 28,000 souls, embracing Moslems, Jews, and Christians, who occupy separate quarters. The chief buildings are mosques, churches, and convents. The Church of the Holy Sepulchre—reputed to contain the grave of Our Saviour—is at the W. extremity of the city. The Mosque of Omar stands on the site of the Temple. The general aspect of the interior of the city is now monotonous, dull, and unattractive to the last degree.

The chief ports are *Smyrna*, *Beyrout*, *Trebizond*, and *Sinope*.

The great industrial centres are *Smyrna* (commerce), *Damascus* (commerce and manufacture of silks, arms, and jewelry), *Aleppo* (commerce and manufacture of silks, cottons, and gold and silver tissues), *Erzeroum*, *Brussa*, *Bagdad*, *Mosul* and *Bussorah* (all commercial emporiums).

Other noteworthy towns are *Mecca* and *Medina*, in Hedjaz, Holy Cities; *Manissa*, in Aidin, anciently famous for its loadstones (hence called "Magnets"); *Tadmor* or *Palmyra*, "the City of Palms," built by King Solomon, but now in ruins; and *Mocha*, on the Red Sea, famous for its coffee.

INDUSTRIES.—*Agriculture* is the chief industry of the country; but it is pursued so languidly, that perhaps hardly a tithe of the land's great productive power is realized. *Manufactures* are carried on in the same listless manner, and only yield enough of their kinds for home use; these include sword-blades, gun-barrels, jewelry, leather, gold and silver lace, &c. *Commerce* has vastly improved during recent times, but want of roads impede its due development.

Obs. The chief exports are corn, oil, dried fruits, tobacco, opium, gums, silk, cotton, dye-stuffs, sponges, &c.; imports, silk, cotton, and woollen fabrics; coal, iron, copper, tin, and machinery.

COMMUNICATIONS.—The *Sea* is the grand route of communication for Asiatic Turkey. The *Rivers*, generally, are scarcely navigable. The *Roads*, as a rule, are execrable; a good road, however, connects Damascus with Beyrout, and another is being constructed between Jerusalem and Jaffa. *Railways* can hardly be said to exist, there being but two short lines; one from Smyrna, N. to Magnesia; the other from Smyrna, S. to Aidin. Their joint length is only 144 m. *Telegraphic Communications* are tolerably complete.

GOVERNMENT AND EDUCATION.—See p. 107.

RELIGION.—The Turks, Druses, Arabs, Circassians, and Tartars, are *Mohammedans*. The Armenians, Greeks, Syrians, and Chaldeans, are *Christians*.

ARABIA.

PHYSICAL GEOGRAPHY.

Latitude. Between 12° 45' and 30° N. *Longitude.* Between 36° and 60° E.

Area. About 100,000 sq. m.

Obs. These limits do not include those portions of the Arabian Peninsula which are claimed by Turkey.

POSITION AND BOUNDARIES.—Arabia lies in the S. W. of Asia. It is bounded on the

W., N., and N.E. by Asiatic Turkey. E. by the Persian Gulf, and the Gulf of Oman. S. by the Arabian Sea, and the Gulf of Aden.

Obs. 1. The Arabian Sea is that part of the Indian Ocean which washes the shores of Hindustan, Baluchistan, Arabia, and N.E. Africa. The interest and importance of this sea centre in the fact that it forms part of the great highway between England and India.

Obs. 2. The Persian Gulf extends from Ras-el-Had to the mouth of the Shat-el-Arab, a distance of 700 m.; its *breadth* varies from 150 m. to 300 m. It separates Persia from Arabia, and communicates with the Arabian Sea by the Strait of Ormuz. The Persian Gulf is important because of the large trade done through it between Bombay and Turkey, Persia and Arabia, and because of its valuable pearl fisheries, the most productive in the world.

Obs. 3. The Red Sea separates Arabia from N.E. Africa, and communicates with the Arabian Sea by the Strait of Bab-el-Mandeb. Its *area* is about 180,000 sq. m. At its N. extremity it is divided into two arms, which are called the Gulfs of *Suez* and *Akaba*, and between which lies the Sinaitic peninsula. As part of the great highway to India and the East, this sea is one of vast importance.

COASTS.—These are generally low and sandy; but they embrace some good harbours. The chief

1. **Capes**, are Fartak, and Merbat, on the S.; and Had, Musandam, and Rekkan, on the E.
2. **Inlets**, the Bays of Aden, Kamar, and Kuria Muria on the S.
3. **Straits**, the strait of Ormuz, joining the Gulf of Oman to the Persian Gulf.

ISLANDS.—The chief Arabian Islands are the Farsan Archipelago, Kamaran, and Perim, in the Red Sea; the Kuria Muria group, and Moseirah, off the S.E. coast; and Bahrein, in the Persian Gulf.

Obs. 1. Kamaran, Perim, and the Kuria Muria Group, belong to Great Britain.

Obs. 2. Bahrein, lying W. of the peninsula of Katar, derives its importance from its position with respect to the pearl fisheries, which are the most productive fisheries of the kind in the world.

SURFACE.—The surface of Arabia may be regarded as consisting, roughly, of three parts, which are tolerably equal to one another in extent, viz., 1. An outer belt of mountainous country, including ranges of rugged and precipitous outline, which, while being fairly fertile on the inner slopes, are mostly barren on their sea side. 2. A central plateau, consisting of a series of tablelands, undulating in long slopes that are rich in pasturage, and traversed by deep valleys which are noted for their field and garden produce. 3. An unbroken belt of sterile desert which lies between the central plateau and the outer belt. The chief

1. Mountains, are the

a. Mountains of Hadramaut and Mahrah, in the S., which consist of a range bordering the shore and rising from 1,000 to 3,000 ft. above the sea, and of an inner and loftier chain. They are characterised by an almost monotonous sterility.

b. Jebel Akhdar (Green Mountain), the principal range in the mountainous district of Oman. It reaches an elevation of 6,000 ft., and runs parallel with the shores of the Gulf of Oman.

c. Jebel Torweyk (Complication Chain), a crescent-shaped range which forms the backbone of Central Arabia N. of the tropic of Cancer.

d. Jebel Shomer, consisting chiefly of the two parallel ranges of *Jebel Aja*, and *Jebel Selma*, both of which traverse two-thirds of the peninsula from N.E. to S.W. Their highest peaks nowhere exceed 4,000 ft. above the sea.

2. Deserts.

About a third part of Arabia consists of irreclaimable desert which lies in a great ring¹ around the central plateau. The S. portion of the ring expands into a huge waste of burning sand: the N. portion is narrower, and of a stony² character. The chief divisions of this sterile belt are the

a. Dahna ("Red Desert"), a vast ocean of loose reddish sand, 50,000 sq. m. in extent, which stretches from Oman in S.E. to Yeman in S.W., and from the Central Plateau (Nejd) on the N. to the mountains of Hadramaut on the S.E.

b. Northern Desert, an extensive region of hard gravelly soil, interspersed with tracts of sand, which stretches from the head of the Persian Gulf to Hedjaz. It rises from the level of the Persian Gulf to an elevation of from 1,000 to 2,000 ft., and is dotted here and there with scanty vegetation.

3. The Central Plateau or Nejd,

a vast parallelogram stretching from N.E. to S.W. across the middle of Arabia, and including more than a third part of the whole country. This is the region which the Arabs regard as their home *par excellence*, as the cradle of their most cherished traditions and institutions, and as the stronghold of their vigorous nationality.

DRAINAGE.—Although the annual rainfall in Arabia is considerable, there is no river which reaches the sea. The mountain torrents are, for the most part, quickly absorbed by the earth: the few that reach the deserts are swallowed up by the thirsty sands.

CLIMATE.—The chief features of the climate of Arabia are excessive heat and aridity. Winter is severe on the central plateau, and is a wet season all over the country. The deserts are frequently swept by the fiery and pestilential wind called the "Simoom."

PRODUCTIONS.—Of *Animals*, the horse, ass, and camel are the most valuable domestic varieties. The horse and ass attain their greatest excellence in Arabia. Of *Wild Animals* the tiger, panther, hyena, deer, mountain goat, and hare are the chief. The ostrich, and the hoopoe are the most remarkable *Birds* of Arabia. Of *Vegetable Productions* the chief are dates, coffee, and millet. The date is to the Arab what corn is to the N., and rice to S. nations.

PEOPLE, AND LANGUAGE.—The *Population* is about 9,000,000, nearly one-fifth being Bedouins, or "dwellers in the open land,"

¹ The Greeks and Romans seeing this desert frequently, and being unable to traverse it, inferred that the whole interior of Arabia was an uninhabitable waste, and named it "Arabia

Deserta."

² Hence its classical appellation of "Arabia Petraea."

who live in tents and occupy the desert belt. They are called also *Nomad Arabs*, while the dwellers in fixed abodes are called *Settled Arabs*. The common *Language* is a corrupt form of the Arabic of the Koran.

POLITICAL GEOGRAPHY.

POLITICAL DIVISIONS AND CHIEF TOWNS.—The Political Divisions are but ill-defined ; but they may be roughly classed as

1. COUNTRIES SUBJECT TO THE SULTAN OF OMAN, which stretch along the coast in the S.E. from Dabar to the island Bahrein. The *capital* is Mascat.
2. COUNTRIES SUBJECT TO THE SULTAN OF WAHHABEE, which stretch from the Persian Gulf to the Hedjaz, and from the Northern Desert to the Dahna. The *capital* is Riad in Nejd.
3. COUNTRIES SUBJECT TO THE SULTAN OF SHOMAR, which lie N. of the Wahhabee sovereignty. The *capital* is Heyel or Hail.
4. HADRAMAUT, which stretches from Oman in the S.E. to Yemen in the S.W. Its *chief towns* are Makalla, and Shehr, on the S. coast.

INDUSTRIES.—*Agriculture*, though in a rude and primitive condition, forms, with *Pasturing*, the chief industry of Arabia. *Fishing*, and *Pearl Fishing*, occupy a large proportion of the population of the maritime districts. *Manufactures* flourish in Oman alone; they include weaving, gold and silver lace embroidery, silver work, gold filigree, and steel implements of great excellency. For *Trade* and *Commerce* the Arabs have great aptitude, and very largely engage in them.

Obs. The chief *exports* are camels, sheep, hair, wool, coffee, dates, horses, and pearls: the *imports* are cotton, cloth, Indian prints, sugar, hardware, arms, ammunition, and trinkets.

COMMUNICATIONS.—These consist of camel and caravan tracks on which the transit trade of the country still continues to be done.

GOVERNMENT, RELIGION, AND EDUCATION.—The general form of *Government* is patriarchal. The independent chiefs are numerous, and more or less despotic. The *Religion* of the Arabs is Moham-medanism, and no other profession of faith is tolerated. *Education*, in the ordinary sense of the word, scarcely exists; there are no schools among the Bedouins, and very few among the settled Arabs.

PERSIA.

PHYSICAL GEOGRAPHY.

Latitude. Between 25° 40' and 39° 50' N. *Longitude.* Between 44° 20' and 63° E.
Area. About 636,900 sq. m.

POSITION AND BOUNDARIES.—Persia lies in S.W. Asia. It is bounded on the N.E. by Turkestan; N.W. by Russia; W. by Turkey; E. by Baluchistan and Afghanistan.

COAST.—The *coast-line* of Persia amounts to about 1,500 m. viz., 1,200 m. in the S. upon the Gulfs of Persia and Oman, and 300 m. in the N. on the S. shores of the Caspian Sea. The chief

- 1- **Capes** are, Farsa, Mundani, and Jask, on the S.; Jabrin, and Barkan, on the E.
- 2- **Bays** are, Bushire, in the Persian Gulf; and Resht, in the Caspian.
- 3- **Straits**, that of Ormuz, which connects the Gulfs of Persia and Oman.

ISLANDS.—Of which the chief are Ormuz, and Kishm, in the Strait of Ormuz; and Karak, nearer the head of the Persian Gulf.

Obs. **Karak**, a few miles from the Persian shore, seems destined to become a great commercial depot on the Euphrates route to India. It is of coral formation, very fertile, and has a pearl fishery on its N. coast.

SURFACE.—The plateau of Persia is diversified with mountainous regions, arid deserts of salt and sand, rich plains, and fertile valleys. The most important

1. **Mountains** are the

a. **Elburz**, which runs E. and W. near the S. shores of the Caspian, is covered with forests, and culminates in *Demavend* (18,600 ft.).

b. **Kûh Dindr**, the loftiest of the many parallel ranges in S.W. Persia. It lies in Fars, and has not yet been explored; but the mean elevations of its peaks is estimated at from 17,000 to 18,000 ft.

c. **Kûrû Kûh Mts.**, which lie near the centre of Persia, between Isfahân and Kashan, and are estimated to reach about 11,000 ft. above the sea.

d. **Mountains of Khorasân**, which occupy Central and E. Persia, run generally N.W. and S.E., and attain about the same elevation as the Kûrû Kûh.

2. **Deserts**, the most important of which are the

a. **Great Salt Desert of Khorasân**, a sterile and blighted waste in the heart of the empire, which is relieved only at rare intervals by small oases.

b. **Desert of Kirman**, a dreary region of arid salt marshes, interspersed with ridges of rock, which lies S.E. of the Great Desert.

Obs. These deserts fall within the sterile and rainless zone which stretches from the heart of Africa to the heart of Asia.

3. **Maritime Plains**, which are situated on the

a. **S. shores of the Caspian**, and form a low, swampy, malarious, but most fertile, strip of country of about 300 m. long, and from 5 m. to 30 m. broad.

b. **Persian Gulf**, and consist of a succession of sandy deserts interspersed with occasional plantations of date palms near the rare wells and fresh-water rivulets.

DRAINAGE.—Water is the boon of which nature has been most niggard in Persia: even streamlets are few and far between except in certain favoured regions. None of the rivers are navigable for more than a few miles above their mouths. Many of them are mere torrents which are almost dry during the long heats of summer and autumn; many more never reach the sea at all, but either empty their waters into lakes or are lost in the sands. The chief

1. **Rivers** are the

a. **Atrek**, which has its sources on the S. slopes of the Kopet Dâgh, and flows into the S.E. corner of the Caspian.

b. **Kizil¹ Uzain or Safid² Rud**, which rises in the W. Highlands, and flows through the Elburz Mts. into the Caspian.

¹ **Kizil Uzain**—"Golden Stream."

² **Safid Rud**—"White River") is the name of the lower course of the river.

c. Karūn, a tributary of the Shat-el-Arab, which has its sources in Luristān.

d. Karkhah, another tributary of the Shat-el-Arab, which rises among the Zagros Mts.

e. Hari Rud, which rises among the Khorasān Mts., and flows for some distance on the N.E. frontier, and then turns E. into Afghanistan.

2. Lakes are

a. Urmia, in the N.W. corner of Persia, a large expanse of salt water, 1,735 sq. m. in extent, and draining a very considerable area of territory through the rivers Aji Chāil, and Jaghatu.

b. Niriz, among the Kūh Dinār Mts., a small sheet of salt water, which receives the river Kūr.

CLIMATE.—The *climate* of Persia varies extremely in different localities. In the S. the summer heat is intense, while the winter cold in the N. rivals that of the Arctic regions. The summer heat in the N., however, is so oppressive that the dwellers in the plains betake themselves to the mountains, and live in tents from June to September. In the W. and S.W. Highlands the climate is more equable and temperate and there is a moderately good rainfall.

PRODUCTIONS.—The *Productions* of Persia include, in addition to those common to most parts of Europe,

Domestic Animals, as the camel, dromedary, and mule. *Wild Animals*, as the lion, leopard, hyena, tiger-cat, wild sheep, and wild ass. *Cereals* and *Fruits*, as rice, figs, dates, grapes, melons, and pomegranates. *Drugs*, especially assafetida, gum-ammoniac, opium, wild liquorice, and manna. *Sundry other Vegetable productions*, as silk, cotton, tobacco, sugar, palm oil, and timber. *Minerals*, especially turquoises, sulphur, salt, and naphtha.

PEOPLE AND LANGUAGES.—The *Population* is about 7,000,000, nearly half being of Persian blood: the rest are Turks, Kurds, Arabs, and Jews. Persian and Turkish are the chief *Languages*.

POLITICAL GEOGRAPHY.

POLITICAL DIVISIONS.—For administrative, civil, and military purposes, Persia is divided into *Provinces*, each of which is under the control of a civil and military governor.

Obs. The miserable government and organization of this kingdom, together with the absence of correct statistics, make it impossible to give the actual number and limits of the Persian Provinces. The following table contains the most important of them, with their principal towns.

POSITION.	PROVINCE.	CAPITAL.	POSITION.	PROVINCE.	CAPITAL.
ON THE CASPIAN.	1. Astrabad...	Astrabad.	ON THE PERSIAN GULF.	7. Farsistan ..	Shiraz.
	2. Masandaran ..	Sari.		8. Laristan ..	Lar.
	3. Ghilan	Resht.			
ON THE TURKISH FRONTIER.	4. Azerbaijan ..	Tabriz.	IN THE INTERIOR.	9. Kirman ..	Kirman.
	5. Irak Ajmi ..	Tehran.		10. Khorasān ..	Mash-had.
	6. Luristan	Dizful.			

NOTES ON THE TOWNS.—The five most populous towns are *Tehran* (100,000), *Tabriz* (100,000), *Isfahan* (80,000), *Mash-had* (upwards of 60,000), and *Yezd* (40,000).

Obs. *Tehran*, the capital of Persia, lies 12 m. S. of the Elburz mountains. It is 4 m. round and has a population of 100,000. The principal building is the *ark* or *citadel*, which contains the palace of the Shah and the houses of most of his court.

The chief ports are *Bushire*, and *Bandar Abbas* or *Gombroon*, on the Persian Gulf; *Anzali*, and *Barferush*, the former on, the latter near, the Caspian.

The chief commercial centres are *Tabriz*, *Isfahan*, *Resht*, *Mash-had*, and *Hamadan*.

The chief industrial centres are *Isfahan* (gold and silver wares, firearms, sword-blades, earthenware, glass, and textile fabrics), *Mash-had* (silk, velvets, and silk and satin fabrics, checked cotton cloths, and steel for sword-blades), *Yezd* (as at *Isfahan*), and *Shiraz* (wine, and rose-water).

INDUSTRIES.—The bulk of the people are engaged in *Agricultural* and *Pastoral pursuits*. *Manufactures* embrace silks, velvets, carpets, cotton and woollen cloths, shawls, chintzes; fire-arms, sword-blades, cutlery, paper, glass- and stone-wares, jewelry, and leather goods. *Commerce* receives much attention and is carried on chiefly with *Russia*, *Constantinople*, *Central Asia*, and *India*.

Obs. The chief *exports*, are raw silk, dried fruits, horses, tobacco, sulphur, shawls, and carpets. The *imports*, are manufactured goods from Europe, diamonds, calicoes, sugar, rhubarb, and indigo.

COMMUNICATIONS.—Persia has no *Navigable Rivers*, no *Railroads* and very few *High Roads*. The transit of her commerce is effected by caravans.

GOVERNMENT, RELIGION, AND EDUCATION.—The *Government* is autocratic, the Shah being absolute ruler within his dominions, and lord of the lives and goods of all his subjects. The *Religion* is almost exclusively Mohammedan. The Dissenters are composed of Jews, Parsees, Nestorians, and Armenians; but these altogether do not number 80,000. *Education*, so far as the upper classes are concerned, is in a fairly advanced state. Large numbers of State-aided colleges are scattered all over the kingdom, and no other country in Asia, except China, has so large a proportion of its population under elementary instruction.

AFGHANISTAN.

PHYSICAL GEOGRAPHY.

Latitude. Between 29° and 38° N. *Longitude.* Between 61° and 74° 50' E.
Area. Upwards of 220,000 sq. m.

POSITION AND BOUNDARIES.—Afghanistan lies S.W. of Middle Asia. It is bounded on the N. by Turkestan; E. by E. Turkestan and Hindustan; S. by Baluchistan; W. by Persia.

Obs. The boundary lines of Afghanistan are very fluctuating.

SURFACE.—The country forms a great quadrilateral plateau, which lies at a mean elevation of more than 5,000 ft. above the sea, and is mountainous: its general aspect is that of a series of elevated, flat-bottomed valleys bounded by bleak and bare spurs. Some of the ranges in the N. and N.E. are, however, well wooded and include some magnificent scenery. The chief surface features are the

1. **Mountains**, as the

a. *Hindu Kush*. See p. 122.

b. *Koh-i-Baba*. A W. continuation of the Hindu Kush, which stretches about 80 m. from 68° 20' E. long. It is a snow-clad range of great elevation, which parts the valleys of the Helmand and Oxus, contains many lofty peaks, amongst which stands conspicuous the *Chalap Peak* (18,000 ft. ?); is crossed by the Irak (13,000 ft.), and several other *Passes*; and of which, withal, very little is as yet accurately known.

c. *Safid Koh* (*White Mountains*), a W. offset of the Koh-i-Baba which divides the valleys of the Hari Rud, and Murgab rivers, runs N. of and past Herat, and finally merges into the Turkman desert.

d. *Siah Koh* (*Black Mountains*), also a W. branch of the Koh-i-Baba, which parts the Hari Rud from the Helmand, and runs S. of Herat, following a line nearly parallel to the Safid Koh.

e. *Sulaiman Mountains*, a range which runs N. and S. and forms the mountain system of E. Afghanistan and Baluchistan. Its E. slopes drain to the Indus; its W. slopes to the Helmand, or to the thirsty desert between Persia and Baluchistan. The highest point is the *Pir Ghul Peak* (11,580 ft.), but *Takht-i-Sulaiman*¹ (11,303 ft.) is the most notable of its summits.

2. **Plains**. The plain country of Afghanistan is of small extent and lies, chiefly, (1.) In the N.E. between the foot of the N. slopes of the Hindu Kush and the Oxus. (2.) In the S.W., about the Sistan Lake. (3.) In the W., around Herat.

3. **Valleys**. Afghanistan has been described as a "Star of Valleys," radiating round the stupendous peaks of the Koh-i-Baba, and everywhere bounded by mountains of a very rugged and difficult nature. They are elevated, flat-bottomed valleys, of an open undulating character, and containing considerable tracts of level ground. The chief of them are (1.) The Valley of the Kabul River. (2.) The Valley of the Helmand. (3.) The Valley of the Hari Rud. (4.) The Valley of the Murgab. (5.) The tributary valleys of the Oxus.

DRAINAGE.—Although the rainfall of Afghanistan and the drainage from its mountains are very large, only two of its rivers are of considerable magnitude; the rest are everywhere fordable throughout the greater part of the year. The largest of them partake of the nature of torrents and derive their importance from their use in irrigation and from the interruption which they occasion to travellers. The chief of the draining agents are the

1. **Rivers**, of which the chief are the

a. *Kabul*, the most important river in Afghanistan. It is formed by the union of many streams from the Hindu Kush and Paghman mountains, flows over a generally S.E. course of 300 m. long, and falls into the Indus, on its right bank, at Attock. Its principal *tributaries* are the Logar, on the right, and the Kunar or Beilam, on the left bank. A few miles of the lower course of the Kabul is navigable for small craft.

¹ *Takht-i-Sulaiman*—"the throne of Solomon."

b. Helmand, the only considerable river in its latitude between the Tigris and the Indus. It rises in the Koh-i-Baba and Paghman mountains, flows S.W. over a course of more than 700 m., and falls into the lake or swamp of Sistan. Its numerous *tributaries* are little known, but the chief of them appears to be the Argand-ab, which it receives on its left bank.

Obs. Other rivers of Afghanistan are the Upper Oxus, on the N. frontier, the Kokcha, and Ak-serai tributaries of the Oxus; the Hari-Rud which flows by Herat; the Farra-Rud, and Harut-Rud, which fall into Lake Sistan.

2. Lakes, the chief of which are the

a. Sistan Lake,¹ on the S.W. frontier, which is about 70 m. long, from N.E. to S.W., and from 15 to 20 m. broad. It is in reality a mere marsh, covered with reeds and rushes, being nowhere more than 3 or 4 ft. deep. It is formed by the accumulation of the waters of the Helmand, Khash Rud, Farra Rud, &c.

b. Ab-Istada, on the Ghilzai plateau, 65 m. S.W. of Ghazni. It is 17 m. long, and 15 m. broad. Its chief affluent is the Ghazni river. It is drained into the Helmand by the Kishani, and its waters are salt and bitter.

CLIMATE.—There is great variety of climate. The *summer heat*, however, is everywhere, except on the highest mountains, very great. The *winters* on the highlands are severe; in the valleys and in the S.W. plain they are more temperate. Generally speaking, the climate is not very salubrious; there are, however, certain localities, as the Tobah hills, and some of the lofty valleys of the Safid Koh, where it is delicious.

PRODUCTIONS.—Of *Domestic Animals*, the horse, camel, cow, sheep, goat, and dog are chief; the *Wild* species include the leopard, hyena, wolf, fox, wild hog, &c. The *Vegetable produce* embraces wheat, rice, maize, millet, and tobacco; almost all European and many tropical kinds of fruit; cotton, sugar-cane, and drugs—especially assafoetida, liquorice, and opium. *Minerals* are said to abound, the chief species being iron, copper, lead, antimony, sulphur, nitre, and lapis-lazuli.

PEOPLE, AND LANGUAGE.—The *Population* is about 5,000,000. The most important tribe is that of the Durranis. Other important tribes are the Ghilzais, on the elevated plateau N. of Kandahar; the Yusufzais, the Kakars, and the Hindkis, the last being of Hindu descent. Near the Khybar Pass are several independent frontier tribes—*e.g.*, Momands, Afridis, Shinwaris, &c., who are freebooting marauders. They speak, generally, the Pushtû, or Pukhtû, *Language*; but all educated Afghans are familiar with Persian.

POLITICAL GEOGRAPHY.

POLITICAL DIVISIONS AND CHIEF TOWNS.—The precision of European organization and administration is not to be looked for in Afghanistan. The country is said to be divided into the provinces of *Afghan Turkestan*, *Kabul*, *Jalalabad*, *Ghazni*, *Kandahar*, and

¹ Called also "Hamûm," a Persian term meaning plain, level ground, or an expanse of water.

Herat. To these are sometimes added the command of the *Ghilzais* and *Hazaras*.

NOTES ON THE TOWNS.—The most important towns of Afghanistan are *Kabul* (20,000), *Ghazni*, *Kandahar*, and *Herat*.

Obs. *Kabul*, at the junction of the rivers *Kabul* and *Logar*, lies 190 m. W. of *Peshawar*. It is regarded as the capital of Afghanistan and is the centre of a large transit and internal trade. It is 3 m. in circumference, has a population of 20,000, and is the key of Afghanistan on the side of the upper *Indus*.

Herat, in the N.W. lies on the right side of, and 3 m. distant from, the *Hari Rud*, and is the key of Afghanistan on the side of *Turkestan* and the *Caspian*. The city is beautifully situated in a well watered and fertile valley, is surrounded by high walls which are pierced by five gateways, and is a central depôt for the products of *India*, *Tartary*, *Afghanistan*, and *Persia*.

Other notable places are *Jalalabad*, *Istalif*, 20 m. N.W. of *Kabul*, *Charikar*, 20 m. N. of *Istalif*, and *Kalat-i-Ghilzai*, an important fortress on the *Jarnak*.

INDUSTRIES.—*Agriculture*—especially the culture of wheat, rice, maize, millet, and fruits—and *Cattle-Rearing*, form the chief occupations of the Afghan tribes. *Manufactures* include the production of silks, felts, carpets, postins (various kinds of skin coats), and rosaries. *Trade* is very extensive with *India*, *Persia*, *Bokhara*, *Khiva*, and *E. Turkestan*; the principal exports being horses, postins, dried fruits, nuts, and drugs; the imports, tea, sugar, goat-skins, and shoes.

COMMUNICATIONS.—There are no made *Roads* in Afghanistan, and, generally speaking, nothing is done to facilitate communication; all goods are transported on the backs of beasts of burden, principally camels, along routes which are difficult, and often perilous.

GOVERNMENT, RELIGION, AND EDUCATION.—Afghanistan is governed by one prince; but his is the government of a dictator for life over a military aristocracy, and within which is a congeries of small democracies, rather than a monarchy as we are accustomed to understand the term. The Afghans and all the inhabitants of the country except the *Hindus* and other scattered foreigners are *Mohammedans*, but are divided into the *Suni*, or orthodox, and the *Shiah*, or heretical *Mohammedans*. Of *Education* there is none but that of learning to read the *Koran* in the rare village schools.

BALUCHISTAN.

PHYSICAL GEOGRAPHY.

Obs. It is to be noted that Baluchistan has been but very imperfectly explored, and that territorial appellations are but loosely applied.

Latitude. Between 25° and 30° N. *Longitude.* Between 61° 10' and 68° E.

Area. 106,500 sq. m., of which 60,000 sq. m. belong to *Persia*.

POSITION AND BOUNDARIES.—Baluchistan lies to the S. of *Central Asia*. It is bounded on the

N. by *Afghanistan*; E. by *Hindustan*; S. by the *Arabian Sea*; W. by *Persia*.

COASTS.—The coasts skirt the Arabian Sea for about 700 m. Their chief features are the

1. **Capes**, Nu, and Sarain.
2. **Inlets**, the Pays Gwatar, and Sonmeane.

SURFACE.—The surface is mountainous in the E., S., and W.; but consists of a vast plain in the N. which slopes gradually down to the Helmand and includes large regions of sandy or stony desert. There are extensive valleys among the mountains but they are mostly sandy and barren. The chief

1. **Mountains** are the

a. *Baluch Range*, which runs E. and W. parallel to the coast, from the 59th to the 66th meridian, at a mean distance of 100 m.

b. *Mountains of Baluchistan*, which consist of three distinct chains from the Persian Mountain system, trending generally from N.W. to S.E., and limiting the Baluch range on the W.

c. *Trans Indus System*, which fills E. Baluchistan from N. to S., and has for its main chain the *Hala Mts.*

2. **Plains and Deserts** extend in all directions from the bases of these mountains; but very little is, as yet, known about them.

DRAINAGE.—The drainage is scanty, and, with one exception, the rivers form continued streams only after the winter rains. The chief **Rivers**¹ are the

a. *Mdshkid*, which flows E. and N. towards the Sistan Lake, but is said to lose its waters in the desert somewhere about the 29th parallel.

b. *Bampur*, which rises among the Western Mountains, and flows N.W. to the 59th meridian, where its waters disappear in a sandy desert. This is the only river whose waters are continuous at all seasons.

c. *Dasht*, which is formed by the union of the Nihing and Kej rivers, and flows S.W. into the Gwatar Bay.

CLIMATE.—The climate is only moderately salubrious. In the mountainous districts it is marked by extremes of cold; while the low-lying deserts and coast regions are hot and unwholesome.

PRODUCTIONS include *Domestic Animals* of the same species as are found in Persia; among *Wild Animals*, leopards, wolves, hyenas, jackals, tiger cats, wild dogs, wild asses, antelopes, deer, foxes, and wild hogs, are common. *Vegetable Produce* embraces rice, cotton, indigo, tobacco, dates, sugar-cane, rhubarb, and assafœtida. *Minerals*—iron, copper, lead, tin, antimony, sulphur, alum, and saltpetre—are known to exist in considerable quantities, but they are not systematically worked.

PEOPLE, AND LANGUAGE.—The *Population* is about 2,000,000, and consists of the Baluch, a people of apparently Iranian origin, mostly nomads, spread over W. Baluchistan, and in the central and S. districts, and who speak a *Language* allied to Persian; and the Barahúi, or Brahúi Baluch, who are of different tongue and race, but as to whose *Language* and race opinions are very varied.

¹ No Baluchistan river bears the same name from source to mouth.

POLITICAL GEOGRAPHY.

POLITICAL DIVISIONS.—Of these, properly speaking, there are none. The following are the usual *territorial divisions* with their chief towns or villages. But it must be borne in mind that the boundaries of these territories are by no means fixed and definite.

TERRITORIAL DIVISIONS.	TOWNS, OR VILLAGES.	TERRITORIAL DIVISIONS.	TOWNS, OR VILLAGES.
1. Makran {	Bampur, Gwadar, Chahbar. ¹	4. Kach Gandava {	Gandava, Quettah, Dadur.
2. Lussa	Belah, Sonmeane.	5. Kelat	Kelat, Ghurruk.
3. Thalawan	Khozdar, Sohráb.	6. Sarawan	Sarawan, Nushki.
		7. Kohistán	

NOTES ON THE TOWNS.²—The most noteworthy towns are *Kelat* (the capital), *Bampur* (capital of Persian Baluchistan), *Chahbar*, and *Gwadar* (small ports on the Makran coast), *Dadur* and *Quettah* (at the S. and N. ends of the *Bolan Pass*, the long defile which leads from the Indus to Afghanistan).

Obs. Kelat, the chief town, is situated on a high hill S.W. of the Bolan Pass. It is strongly fortified, but was captured by British forces in 1839 in consequence of the hostile demonstrations of the Baluchs against them as they advanced through the Bolan Pass towards Afghanistan. It is the emporium of a large transit trade, and has *manufactories* of arms.

INDUSTRIES, AND COMMUNICATIONS.—*Agriculture*, of a very elementary character, is carried on in the vicinity of the towns and villages, but to a limited extent only; the nomadic tribes rear sheep, cattle, and horses. *Commerce* is in the hands of Hindus, and is restricted to the *export* of horses from Kelat, dates from the S. of Makran, and corn from the E. provinces. There are no *Made Roads* in Baluchistan, but nearly every part of the country is easily accessible to camels, which traverse it in all directions.

GOVERNMENT, RELIGION, AND EDUCATION.—The E. provinces acknowledge a sort of allegiance to the Khan of Kelat, but his authority is little more than nominal. The W. provinces are under the dominion of their respective chiefs. With regard to *Religion*, the people belong to various sects of Mohammedans. Of *Education* there is none.

ANGLO-INDIAN EMPIRE.

BRITISH EMPIRE IN INDIA—HINDUSTAN.

PHYSICAL GEOGRAPHY.

Latitude. Between 8° 5' and 36° 30' N. *Longitude.* Between 66° 45' and 96° 30' E.

Area. 1,467,695 sq. m., of which 855,364 sq. m. belong to British India.

Obs. 1. Under the term "*Hindustan*" (the country of the Hindus) is here described the *peninsula* of that name and its adjacent islands; or, in other words, the "*Anglo-Indian Empire*," with the exception of British Burma, the Andaman Islands, Nicobars, and Aden.

¹ The trade of Chahbar is said to have suffered considerably since the Persians took it in 1872. It was the last place on the S. seaboard of Persia which remained independent of the Shah's authority.

² Baluchistan contains no city of importance.

Obs. 2. Extreme length, from Kashmir in the N. to Cape Comorin in the S., is estimated at upwards of 1800 m.; extreme breadth, from Karachi in the W. to the E. extremity of Assam, at upwards of 1500 m.

POSITION, AND BOUNDARIES.—Hindustan is a peninsula of S. Asia. It is bounded on the

N. by Tibet; N.E. by Tibet, and the wild regions N. of Burma; E. by the Bay of Bengal¹; S. by the Indian Ocean; W. by the Arabian Sea, and Baluchistan; N.W. by Afghanistan and Turkestan.

Obs. The *Boundaries* of Hindustan are marked on every side by *natural features*; e. g. the Himalayas, on the N.; the Patkoi Mountains, Tippera Hills, &c., on the N.E.; the Sea, on the E., S., and W.; and the Hala, and Sulaiman Mountains, on the N.W.

COASTS.²—These are generally even, and iron-bound to such an extent as to include but few good natural harbours. The total length of *coast-line* is estimated at 3,600 m., or scarcely 1 m. of coast to every 400 sq. m. of area. The chief

1. **Capes**, are Palmyras, and Kalimir, on the E.; Comorin, on the S.; Ramas (in Goa), and Diu Head (S. of Gujarat), on the W.
2. **Inlets**, are the Gulf of Mannar (between S.E. Hindustan and Ceylon), on the E.; and the Gulfs of Kambay, and Kach, on the W.
3. **Straits**, the chief of which are Palk's Strait (between N.W. Ceylon and the mainland), and the Pamban Channel (between the mainland and Rameswar island) which connects Palk's Strait with the Gulf of Mannar.

ISLANDS.—The most important of these are Ceylon, Mannar, Adam's Bridge, and Rameswar, off the S.E. coast; the Maldive and Laccadive Groups, off the S.W. coast; Salsette, Bombay, and Colaba, off the W. coast.

Obs. 1. **Ceylon**, off the S.E. coast, and separated from it by the Gulf of Mannar and Palk's Strait, has an area of 24,702 sq. m. Its length from N. to S. is 266 m., and its *mean breadth* about 100 m. At its N.W. extremity it is only 40 m. from the mainland, with which it is almost connected by the chain of islands consisting of Mannar, Adam's Bridge, and Rameswar. The *surface* of the island is mountainous in the centre, and sends up several lofty peaks of from 7000 ft. high to upwards of 8000 ft. The most important *productions* are rice, coffee, cocoa-nuts, areca nuts, and cinnamon; pearls, precious stones, iron, plumbago, and valuable timber. In 1871 the *population* was 2,406,262, consisting of Cingalese, Tamils, Veddas, and Europeans. It is divided into 7 *provinces*, and Colombo, on the W. coast, is the *capital*. Ceylon is a Crown colony and quite independent of the India Government.

Obs. 2. The **Maldive Islands**, a long chain of some 50,000 islands and islets, lie about 300 m. off the S.W. of Hindustan. They are of coral formation, and are arranged in 17 groups which are termed "atolls." They stretch from N. to S. for a distance of 500 m. The people are Mohammedans, and are subject to a Sultan, who lives on the Isle of Malé, considers himself dependent on the British Government of Ceylon, and pays an annual tribute.

Obs. 3. The **Laccadive Islands**³ (the "ten thousand isles") are an Archipelago in the Indian Ocean, about 150 m. W. of the Malabar coast, and N. of the Maldives. There are 19 principal isles and vast numbers of islets, but only 8 of them are inhabited, by a population of some 10,000 who are "Moplays" in race and Mohammedans in faith. The islands, however, are of small importance, and the inhabitants are very poor.

Obs. 4. **Salsette, Bombay, and Colaba**, are three principal islands of an archipelago

¹ At the head of the Bay of Bengal lie the "Sandarbans," which are forest-covered mudbanks, permeated by channels and lagoons, lying between the waters of the Bay and the cultivated land of the Ganges delta.

² The E. Coast, between the mouths of the Hugli and Godavari, is called the *Orissa Coast*;

between the Godavari and Krishna (or Kistna), the *Goconda Coast*; S. of the Krishna, the *Coromandel Coast*. The *Malabar Coast* is on the S.W. Coast.

³ The Laccadive Islands were discovered by Vasco da Gama, A.D. 1498, but have belonged to Great Britain since 1792.

which lies close to the Bombay shore in lat. 19° N. Their aggregate area is about 250 sq. m., and they are connected together by causeways. They are remarkable for the Buddhist excavations called "cave temples." The town of Bombay lies at the S.E. extremity of Bombay island.

SURFACE.—The surface is of very varied character. In the N. it consists of the most colossal mountains, and embraces the loftiest summits, in the world. The S. base of this region is skirted throughout its whole extent by a vast level plain, which stretches from the Sulaiman and Hala Mountains on the W. to the mouths of the Ganges on the E. From this plain southwards to the Gap of Coimbatore the peninsula is a series of huge plateaux, buttressed from N. to S., on their E. and W. sides, by mountain chains, traversed in the N. by great transverse ranges, and scored and broken throughout by broad valleys of mighty rivers. Between these plateaux and the sea, both on the E. and W., is a narrow plain, generally low and sandy, but in certain portions of the W. side, crossed by lateral spurs of the W. Ghats. The principal surface features to be noted are the

1. **Mountains**, the chief of which are given in the following table—

CHIEF MOUNTAINS.		DIRECTION AND POSITION.	CHIEF SUMMITS	
			NAME.	HEIGHT IN FEET.
I. INTERIOR MTS.	I. BORDER MOUNTAINS.	1. Himalaya Mts.	On the N. stretching from E. to W. and N.W. between Hindustan and Tibet	Mt. Everest 29,002
		2. Sulaiman Mts.	On the N.W. stretching N. and S. between Hindustan and Afghanistan	Takht-i-Sulaiman 11,303
		3. Hala Mts.	On the N.W. and S. a continuation of the Sulaiman Mountains	? ?
		4. Western Ghats. ¹	On the W. running N. and S. parallel to and near the coast	Bonasson 7,000
		5. Cardamum Mts.	On the S.W. and S. a continuation of the W. Ghats	Anamalli 8,837
		6. Eastern Ghats. ¹	On the E. running from S.E. to N.W. parallel to the coast	? 4,000
		7. Patkoi Mts.	On the N.E. running from S.W. to N.E. between Hindustan and Further India	Saramethi 12,800
		8. Aravali Mts.	In the N.W. stretching from N.E. to S.W. on the W. edge of the Tableland of Malwa	Abu 5,000
		9. Vindhya Mts.	In the centre, stretching E. and W. on the S. of the Tableland of Malwa	? ?
		10. Satpura Mts.	In the W. centre, S. of and parallel to the Vindhyas	? 2,000
		11. Nilagiri Mts.	At the S. extremity of Mysore	Dodabetta 8,640

Obs. Himalaya (see p. 122); Sulaiman Mts. (see p. 144); Hala Mts. (see "Trans-Indus System," p. 141).

2. **Plateaux** form much of India S. of the Ganges. The chief of them are the
a. **Plateau of Malwa**, which lies between the valleys of the Upper Ganges and the Nerbada. It is buttressed on the N.W. by the Aravali Mountains,

¹ So called from the "Ghats" (cf. Eng. *gate*), or "passes," which at intervals traverse these mountains.

which divide it from the Thar or Indian Desert; on the S. by the Vindhya Mts. which separate it from the valley of the Narbada. The surface of the plateau slopes towards the N.E., and is drained into the Ganges, by the Chambal, Sind, and Ken rivers.

*b. Plateau of the Deccan*¹ (or Peninsula), a vast tableland which lies at a mean elevation of about 2000 ft. and slopes towards the S.E., sending its drainage into the Bay of Bengal. Its extent is defined on the E., S., and W. by the E. Ghats, the Nilagiri Mountains, and the W. Ghats respectively: the N. limit is not well defined, being placed, sometimes at the Vindhya Mountains, sometimes at the valley of the Narbada, sometimes at the Satpura Mountains, and sometimes at the Tapti river.

3. **Plains.**—These occupy nearly half the surface of Hindustan. The chief of them are the

a. Plain of the Indus, which stretches from the Himalayas on the N. to the Arabian Gulf on the S. and from the Sulaiman Mts. in the W. to the Aravali Mts. in the E. It includes the Panjab,² the Thar, or Indian Desert, and the Ran of Kach.

b. Plain of the Ganges, which stretches from the Sewalik Hills on the N. to the Plateau of Malwa and the Rajmahal Hills on the S.; and from the basin of the Indus on the W. to the Bay of Bengal and the Brahmaputra on the E.

c. Eastern Maritime Plain, a wide belt of low lying country between the E. Ghats and the Bay of Bengal. Its greatest *breadth* is attained in the S. and N. extremities; between these points the plain contracts to about 30 m. for a short distance near Madras.

d. Western Maritime Plain, a long narrow belt of country between the W. Ghats and the Arabian Sea. The width varies from 20 to 50 m., and the surface is much broken by lateral offsets from the main chain.

DRAINAGE.—The drainage of Hindustan is carried to the ocean down two great slopes, which incline S.E. towards the Bay of Bengal, and S. W. towards the Arabian Sea respectively. The chief draining agents are the

1. **Rivers**, including, with their wonderful networks of tributaries, some of the largest streams in Asia. The chief of them are those which flow down the

a. S.E. Slope, into the Bay of Bengal, viz., The Brahmaputra, Ganges,³ Mahanadi, Godavari,⁴ Krishna,⁵ and Kaveri.

b. S.W. Slope into the Arabian Gulf, viz., The Indus, Narbada,⁶ and Tapti.

*Obs. 1. The Brahmaputra*⁴ (*Son of Brahma*) rises near the point of intersection of parallel 90° 30' N. and meridian 80° E., in a region of unexplored and nameless glaciers, at an elevation of some 15,000 ft. above the level of the sea, and in the vicinity of the sources of the Indus and Satlej. It runs E. as far as the 95th meridian, and then turning S., it is generally thought to break through the great Himalayan barrier, and to enter Assam under the name of the "Great Dihong." Here it doubles back again, and runs W. by S. as far as the 90th meridian, where, rounding the Garo Hills, it runs S. until it entwines its numerous branches with those of the Ganges. After a total course of 1,800 m., this river having drained an area of 861,200 sq. m., falls, like the Ganges, by countless channels, of which the Megna is chief, into the Bay of Bengal. In places throughout its entire course, the Brahmaputra is navigable. Of its many *tributaries* not much is known: the chief of them are the Shorta Sangpo,⁵ Charta Sangpo,⁶ Raka Sangpo,⁷ Kichu Sangpo,⁸ Dibong, Shubanshire, Monass, Tista, and Barak.

¹ Deccan, or Dakhan, or Dakhn, is a Sanscrit word meaning "that which is to the right," i.e. to the South of him who looks towards the rising sun.

² The Panjab is formed by the union of the *Chenab* and *Ghara* rivers. The *Chenab* receives the *Jitlam* and *Ravi*; and the *Ghara* receives the *Satlaj* and *Bart*. The country between the

Indus and the Ghara is called the *Panjab* or *Country of the five rivers*.

³ The Ganges, Godavari, Krishna, and Narbada, are the sacred streams of India.

⁴ The Brahmaputra has various names among the peoples through whose territories it flows.

⁵ Sangpo is the name given by Tibetans to all very large rivers.

Obs. The **Ganges** (*the River*) is formed by the union of the Bhagirathi, from the N.E. slopes of *Mt. Kidarnath*, and the Alaknanda, from the S.E. slopes of the *Kamel*. The river thus formed emerges from the defiles of the Himalaya at Hardwar, flows S.E., E., and S.E., and after a course of 1514 m., falls into the Bay of Bengal by many channels, having drained an area of 391,100 sq. m. Its chief *tributaries* are the Gumti, Gogra, and Gandak on the left bank; the Jamna and the Son on the right bank. The Ganges is navigable for 1,300 m.

Obs. 3. The **Indus** rises on the N. heights of the Himalayas, N.E. of the Kailas peaks, in Tibet. It flows N.W. to a little beyond the 75th meridian E., when bending suddenly round, it takes a S.W. direction to the Arabian Sea, which it enters by several channels after a course of 1,800 m., having drained an area of 372,700 sq. m. The chief *tributaries* of the Indus are the Shayok, and Kabul on the left bank; and the Panjnad¹ on the right bank. The Indus is navigable from Attock to the sea, a distance of 900 m.

Obs. 4. The **Narbada** rises near the sources of the Son and Mahanadi, on the plateau of Amarakantak, flows N.W. and W. between the Satpura and Vindhya Mountains, and, after a course of 801 m., falls into the Gulf of Kambay, having drained an area of 36,400 sq. m.

Obs. 5. Of less important streams there should be noticed the

- (a) *Luni*, from the Aravali Mountains to the Ran of Kach; 320 m. long.
- (b) *Mahi*, from the plateau of Malwa to the Gulf of Kambay; 350 m. long.
- (c) *Vaigai*, from the Travancore Mountains to Palk's Strait; 130 m. long.
- (d) *Palar*, from Mysore to the Bay of Bengal; 220 m. long.
- (e) *Brahmani*, from the plateau of Amarakantak into the Bay of Bengal; 410 m. long.

2. **Lakes** which are not of great importance. The chief of them are

a. *Pangkong*, E. of Kashmir, which is 100 m. long, has a mean breadth of 3 m., and an area of 300 sq. m. It receives numerous large affluents, but has no effluents whatever; its waters are very salt at the W. end.

b. *Woolar*, which is an expansion of the Jhilam, lies on the N.E. side of the Vale of Kashmir, 5189 ft. above the sea, is about 12 m. long and 8 m. broad, and its waters are fresh.

Obs. Other Indian lakes are *Pulicat*, N. of Madras, on the E. coast; *Chilka*, on the E. coast, S. of the Delta of the Mahanadi; *Sambar*, *Didwana*, and *Sir*, salt lakes on the plateau of Malwa; and *Kolair*, between the Godavari and Krishna.

CLIMATE.—Few countries in the world present such varieties of climate as India. It may, however, be said generally that while the climate of Bengal is humid, equable, unpleasant, and unwholesome, that of N.W. and central India is dry, extreme, and salubrious. With respect to *temperature*, India is one of the hottest countries upon earth. In the lower valley of the Indus the *summer temperature* reaches 130° Fahr. in the shade. The *mean annual temperature* is 84° at Madras, 80° at Bombay, 79° at Calcutta, and 75° on the Deccan generally. The hottest months are from March to June.

Obs. 1. The *annual rainfall* varies greatly; for while in the Indian desert it is less than 10 inches, it rises on the Malabar Coast and in the N.E. Provinces to upwards of 100 inches, and in the Khasi Hills on the Coast of Bengal to 600 or 700 inches. The rainy season lasts, in N.E. India, from August to November; on the E. littoral, two months, from October to December; but on the Malabar Coast, eight months.

Obs. 2. The *monsoons* have great influence on the climate of India. That blowing from the S.W. continues from April to August or September; that from the N.E. begins in the middle of October and lasts till April, but its action is confined to the E. Coast. The intervals between the monsoons are periods of considerable atmospheric disturbance.

PRODUCTIONS.—The teeming productions of India are of the most varied and valuable kinds.

¹ See note 2, p. 148.

Of the *Animals* of India some of the most characteristic are the camel, yak,¹ buffalo, humped,¹ or Indian cow, and Kashmir goat;² elephant, rhinoceros, lion, tiger,³ leopard, hyena, wild boar, wild ass, monkey, &c.: eagles, vultures, falcons, hawks, parrots, pheasants, and numerous other kinds of winged game; alligators, crocodiles, serpents, poisonous snakes, scorpions, tortoises, lizards, &c.; the silk-worm, lac-insect, and cochineal.

The chief *Vegetable* productions are rice,⁴ maize, millet,⁵ wheat: yams, potatoes,⁶ pumpkins, cucumbers, mangoes; tea, coffee; timber—especially teak,⁷ sal,⁸ ebony, sandal wood, iron wood, &c.; bamboo, banana, sugar-cane: palms—especially cocoa nut, date, and toddy palms; drugs—particularly opium,⁹ chinchona,¹⁰ and camphor; spices—as ginger, and cardamoms; dyes—as indigo, and saffron; cotton,¹¹ jute,¹² rhea fibre, flax, hemp; india-rubber, &c., &c.

The chief *Minerals* are precious stones—as diamonds, rubies, sapphires, emeralds, garnets, carnelians, &c.; precious metals—e.g., gold and silver; useful metals—as copper, tin, iron, antimony, &c.; coal, salt, salt-petre, petroleum, marbles, and building stone.

PEOPLE, AND LANGUAGES.—The *Population* of Hindustan is estimated at about 240,000,000. It is composed of some 50 different races, speaking a great variety of languages, and representing very diverse stages of human society. The chief peoples are:—

1. The **Hindus**, who form the bulk of the population. They embrace the *Aboriginal Hindus*, who are scattered about the W. of the Deccan under various names: and the *Aryan Hindus* who occupy much of N. Hindustan.
2. **Various Asiatic Races**, the chief of which are of the *Mongoloid* type, in Bhutan and other parts; *Ghurkas*, in Nepal and the neighbouring hills; *Afghans* or *Pathans*, in the N.W. provinces; *Baluchs*, in Sind; *Cathics*, in Kattywar; *Parsees*, on the W. coast about Bombay; *Arabs* and *Black Jews*, on the Malabar coast; and the *Mahrattas*, scattered over the Deccan.
3. **European Settlers**.—These, proportionately, form a very insignificant item of the Indian population. They amount to less than 200,000, and consist of *British* chiefly, *French*, *Dutch*, and *Portuguese*.

POLITICAL GEOGRAPHY.

POLITICAL DIVISIONS.—Hindustan is divided into *British Possessions* and *Native States*.

1. The **British Possessions** occupy about three-fifths of the Peninsula, and for administrative purposes are divided into 13 *Provinces*.
2. The **Native, or Feudatory States** occupy the remainder of the Peninsula, except the small scattered districts belonging to France and Portugal.

¹ The **Yak** and **humped cow** are used as beasts of burden.

² This **goat** yields the wool of which the celebrated Kashmir shawls are woven.

³ An extraordinary feature of Indian life is the number of human beings killed by wild beasts. In Lower Bengal alone, in a period of 6 years, 13,401 people were killed by wild beasts. In 1869 a single tiger killed 127 people, and stopped a public road for several weeks.

⁴ Rice forms the principal food grain of Bengal, Bahar, Patna, and Shahabad; it is also one of the principal food staples throughout a large part of India.

⁵ **Millet**s form the food staples in Gaya, Chuti Nagpur, and many other regions.

⁶ **Potatoes** have been imported into India, and are now one of the food staples of the country.

⁷ **Teak** is the most valuable timber produced by India; it is grown on the W. Ghats, the mountains of Travancore, and in the valley of

the Godavari.

⁸ **Sal** is, after teak, the most valuable timber of India. The sal forests lie along the Tarai, and in the valley of the Narbada.

⁹ **Opium** is one of the main sources of Indian revenue. It is grown chiefly in the valley of the Ganges, and forms a government monopoly. The gross annual revenue from this source averages nearly 8 millions sterling.

¹⁰ The cultivation of **Cinchona** or the **quinine** trees, was introduced into the hill districts of India from S. America in 1860, and is now among the important permanent undertakings of government.

¹¹ There are about 9 millions of acres in India under cultivation for **Cotton**. The great sheet of Trap Rock of the Deccan furnishes the black soil which is so favourable to the growth of the cotton plant.

¹² **Jute** is, after rice, the chief product of Bengal.

Obs. 1. The **Presidencies** and **Provinces** are divided into **Divisions** or **Commissionerships**; these are subdivided into **Revenue** and **Judicial Districts**: and these again into **Executive Subdivisions of Districts**.

Obs. 2. The old distribution of territory under the **Presidencies** of Bengal, Bombay, and Madras are still used when matters of history, geography, or administration are referred to.

The **Presidencies**, **Provinces**, and **Chief Towns** are given in the table.

PROVINCES.	CAPITALS.	OTHER IMPORTANT TOWNS.
I. BENGAL PRESIDENCY.		
Under the Governor-General of India in Council.		
Area. 642,469 sq. m. Population. 143,190,980.		
1. Assam ¹	Sylhet	Gauhati, Goalpara, Sibsagar.
2. Bengal ²	Calcutta	Patna, Howrah, Bhagalpur, ⁴ Cuttack.
3. N. West Provinces ³	Allahabad ⁴	Benares, Agra, Bareilly, Cawnpore. ⁴
4. Oudh ⁵	Lucknow	Faizabad. ⁴
5. Panjab ⁶	Lahor	Delhi, Amritsar, Peshawar, Multan.
6. Central Provinces ⁷	Nagpur ⁴	Kamthi, Jabalpur. ⁴
7. British Burma ⁸	Rangoon	Moulmein, Prome, Bassein.
8. Ajmir ⁹	Ajmir	Nasirabad.
9. Coorg ¹⁰	Mercara	Fraserpett, Somwarpett.
10. Mysore ¹¹	Mysore	Seringapatam, ⁴ Bangalore.
11. Berar ¹²	Akola	Amraoti, Ellichpur. ⁴
II. MADRAS PRESIDENCY.		
In 20 Districts, under a Governor. ¹³		
Area. 137,971 sq. m. Population. 81,672,613.		
12. Madras ¹³	Madras	{ Nellore, Arcot, Tanjore, Trichinopoli, Madurai.
III. THE BOMBAY PRESIDENCY.		
Under a Governor, assisted by a Council, and a Legislative Council.		
Area. 123,502 sq. m. Population. 16,302,173.		
13. Bombay and Sind ¹⁴	Bombay	Ahmadabad, Puna, Surat, Karachi, Nasik.

¹ Assam was erected into a separate administration in 1874, and placed under a **Chief Commissioner**. Its area is 53,856 sq. m.; its population, 4,282,019. The Province embraces 10 districts and its principal Product is tea.

² Bengal, or the Lower Provinces, covers an area of 157,969 sq. m., and has a population of 60,502,897. It is under a **Lieut. Governor**, and embraces 10 **Divisions**, which are under **Commissioners**. The chief **Productions** are rice, maize, millet, opium, tobacco, and jute.

³ The N.W. Provinces have an area of 81,402 sq. m., and a population of 30,799,056, and are under a **Lieut. Governor**. They embrace 7 **divisions**, which are under **Commissioners**. The chief **Productions** are grain, fruit, cotton, indigo, and timber.

⁴ The terminations -abad, -patam, -pur, -poor or -pore, - "a town," or "dwelling."

⁵ Oudh has an area of 23,042 sq. m., a population of 11,230,032, and is under a **Chief Commissioner**. It embraces 4 **Divisions**, which are under **Commissioners**; its chief **Productions** are grain, pulse, opium, cotton, indigo, sugar-cane, and timber.

⁶ The Panjab (region of the five rivers) has an area of 103,748 sq. m., a population of 17,596,752, and is under a **Lieut. Governor**. It embraces 10 **Divisions**, which are under **Commissioners**. Its chief **Productions** are grain, pulse, sugar-cane, cotton, indigo, and saffron.

⁷ The Central Provinces have an area of 84,805 sq. m., a population of 8,201,519, and are under a **Chief Commissioner**. They embrace 4 **Divisions**,

which are under **Commissioners**, and 1 **District**, under a **Deputy-Commissioner**. The chief **Productions** are grain, oil-seeds, sugar-cane, opium, drugs, gums, safflower, indigo, and timber.

⁸ British Burma has an area of 88,364 sq. m., a population of 2,747,148, and is under a **Chief Commissioner**. It embraces 3 **Divisions**. Its chief **Productions** are rice, sugar-cane, pepper, cotton, indigo, jute, and timber.

⁹ Ajmir has an area of 2,762 sq. m., a population of 426,268 and is under the Government of India. The chief **Productions** are grain, pulse, oil-seed, and cotton.

¹⁰ Coorg has an area of 2,000 sq. m., a population of 168,312, and is under the Indian Government. Its chief **Productions** are rice, coffee, and cardamoms.

¹¹ Mysore has an area of 27,977 sq. m., a population of 3,955,412, and is under a **Chief Commissioner**. It embraces 3 **Divisions**, under **Commissioners**. Its chief **Productions** are grain, coffee, sugar, betel, and opium.

¹² Berar has an area of 17,334 sq. m., a population of 2,232,565 and is under a **Chief Commissioner**. Its chief **Productions** are millet and cotton. It embraces 6 **Districts**.

¹³ The Governor is assisted by a Council consisting of the Commander-in-chief, and two civilians. The chief **Productions** are grain, tobacco, cotton, sugar-cane, indigo, coffee, pepper, cardamoms, and timber.

¹⁴ Bombay has for its chief **Productions** grain, cotton, indigo, opium, tobacco, sugar-cane, and timber.

Obs. Of "**Native States**" there are in India more than 460, every one of which acknowledges the supremacy of the British Government. In other respects, however, their rights and obligations differ from each other, some merely acknowledging our supremacy, others undertaking also to follow our advice and to govern their subjects with justice. Some again pay tribute or provide for the maintenance of a contingent; some have power of life and death, others must refer all grave cases to English judges. Since the mutiny nearly all have received guarantees that their chiefs will be allowed to adopt successors on failure of heirs, thus having secured to them their continued existence. The most important of these states are *Kashmir* and *Jamu*, *Rajputana*, *Central India*, *Haidarabad*, *Travancore*, *Manipur* and *Sikkim*.

NOTES ON THE TOWNS.—The fourteen most populous towns are *Calcutta* (794,645), *Bombay* (644,405), *Madras* (397,552), *Lucknow* (284,779), *Benares* (175,188), *Patna* (158,900), *Delhi* (154,417), *Agra* (149,008), *Bangalore* (142,513), *Amritsar* (135,813), *Allahabad* (143,693), *Cawnpore* (122,770), *Puna* (118,886), *Ahmadabad* (116,873).

Obs. *Calcutta*, the capital of British India, the seat of the Governor-General, of the Government, of the Supreme Courts of Justice, of the Court of Appeal for the "Lower Provinces," and of the Metropolitan Bishop of the Church of England in India, lies 100 m. above the mouths of the Ganges, on the left bank of the Hugli, and at the head of the E. Indian, and E. Bengal railways. Its population consists of Hindus, Mohammedans, Europeans, Chinese, Jews, Armenians, Persians, &c. The S. part of the city is occupied by Europeans; the N. part by natives. The public buildings include Fort William, the strongest fortress in India, the Government House, Mint, Custom House, Town Hall, Churches, Mosques, Temples, Chapels, Colleges, and numerous Educational, Literary, and Scientific Institutions. Its principal industries are iron founding, sugar refining, ship building, cotton spinning, and an enormous commerce, which includes the export of opium, indigo, raw silk, sugar, and cotton goods; and the import of silk, cotton, and woollen fabrics, wines, spirits, and cutlery.

Madras, formerly *Madras Pattana* (perhaps = "university town"), the capital of the Presidency and residence of the Governor-General, is badly situated on the Coromandel coast, and at the head of the Madras railway; and though it possesses neither good harbour nor navigable river, it has gradually become the chief commercial emporium of S. India.

Bombay, capital of the presidency, the most important seaport in India, and, after *Calcutta* and *Canton*, the greatest trade emporium in the East, lies on the W. coast, at the S.E. corner of Bombay Island, and at the head of the "Indian Peninsula Railways." The population consists chiefly of Hindus, Mohammedans, Parsees, Europeans, &c. Its extensive trade comprises the export of cotton, opium, timber, silk, ivory, pepper, and spices, coffee, and wool; the import of cotton yarn, cotton and woollen stuffs, iron, copper, &c. The principal manufactures of the town are ship-building, and inlaid work. Next to *Madras*, *Bombay* is the oldest of our possessions in the East; it was ceded to Charles II. in 1661, as part of Queen Catherine's dowry.

The chief ports are *Bombay*, *Calcutta*, *Madras*, and *Karachi*.

The chief commercial centres are *Lucknow*, *Benares*, *Patna*, *Agra*, *Amritsar*, *Allahabad*, *Bareilly*, *Katna*, *Mirzapur*, *Peshawar*, *Nagpur*, and *Leh*; *Surat*, *Broach*, *Hubli*, and *Shikarpur*.

The chief manufacturing centres are *Calcutta* (cotton, jute, etc.); *Patna* (opium, indigo, saltpetre, and sugar); *Amritsar*, *Lahore*, *Multan*, *Bhagalpur*, and *Jalandhar* (all famed for cotton, woollen, and silk fabrics); *Delhi* (silk embroideries); *Benares* (gold brocade); *Nagpur* (cloths, chintzes, etc.); *Faizabad* (cloth and hardware); *Kashmir* (fine shawls); *Trichinopoly* (jewelry, hardware, cutlery, etc.); and *Ahmadabad* (silks and cottons).

Other towns of note are *Plassy* (1757); *Panipat* (1545 and 1761); *Mudki* (1845); *Ferozeshah* (1845); *Aliwal* (1846); *Sobraon* (1846); *Multan* (1849); *Gujarat* (1849); *Assaye* (1803); and *Seringapatam* (1799); which all give their names to famous battles.

INDUSTRIES. — *Agriculture* occupies about two-thirds of the

people, and in every department is constantly improving. Better implements, however, and skilled labour are still sorely needed.

Obs. The chief objects of *culture* are rice, millet, pulses, wheat, maize, barley, seeds; tea (in Assam), coffee, sugar, cocoa nuts, tobacco, peppers, spices; fine fruits; cotton, jute, sunn fibre, hemp, flax, wool; opium; indigo; &c.

Manufactures are very important, and include cotton and yarn spinning, jute, cotton, woollen, and silk fabrics, opium, muslins, gold and silver brocades, cutlery, hardware, sugar refining, tobacco, shipbuilding, iron founding, &c.

Obs. Deserving of special mention under this head are the jewelry of Calcutta, Patna, Benares, and Delhi; the fine ornamental carvings in ivory and fancy woods; the inimitable shawls of Kashmir; the rich carpets of Warangal; the chintzes of Masulipatam; the gold and silver thread embroideries of Benares; and the caps and slippers of Lucknow.

The *Commerce* of India is very large. It includes the *export* of rice, coffee, tea, jute, cotton, indigo, opium, dyes, oils, drugs, seeds, silk, sugar, teak, tobacco, wool, hides, &c.; and the *import* of coal, cottons, machinery, spirits, wines, and specie.

Obs. The *Land traffic* is also considerable between Sind and Afghanistan, and between the Panjab, and Turkestan and Tibet. The merchants in this trade exchange the assafetida, walnuts, pistachios, pomegranates, bhang, and gold dust of Bokhara; the fine wool of Kirman; the raw silks, gold and silver wire, and dried fruits of Kabul, and the borax of Rudok, for the cotton cloths, broad cloths, brocades, indigo, tea, spices, and carpets of India.

Mining is practically confined to salt, coal, and iron, and is not carried on to any great extent.

COMMUNICATIONS.—In 1878 there were 8,215 m. of finished *Railway*, and more in course of construction, in India. There are excellent *High Roads* in N. and Central India, but they are deficient in number. The *Water Communication*, by navigable rivers and canals, is very great. A large *Coasting Trade* is done, which concerns no less than 656 ports and harbours. Every important place is connected by the Electric Telegraph, and there are three lines by which India can communicate with England.

GOVERNMENT, RELIGION, AND EDUCATION.—In 1858 British India was transferred from the East India Company to the Crown, and its affairs are now administered by one of Her Majesty's principal Secretaries of State, called "The Secretary of State for India," who is invested with the powers formerly exercised by the Company, or by the Board of Control, and must countersign all warrants and orders under Her Majesty's sign-manual. He is assisted by a council of 15 members. The prevailing *Religions* are Hinduism or Brahminism, and Mohammedanism. There are also, scattered up and down throughout the country, Christians, Parsees, Jews, and believers in many other creeds. A first-class *Education* is provided for the wealthier classes, and instruction for the masses under the direct supervision of the Government.

FRENCH AND PORTUGUESE POSSESSIONS IN HINDUSTAN.

THE FRENCH POSSESSIONS in India occupy an area of 195 sq. m., and have a total population of 260,000. They all lie in the Presidency of Madras except Chandarnagar, which is in Bengal. They are:

1. *Pondicherry*, in S. Arcot, on the Coromandel Coast.
2. *Chandarnagar*, on the banks of the Hugli.
3. *Yanaon*, in the Godavari delta.
4. *Karikai*, in the Kaveri delta.
5. *Mahe*, on the Malabar Coast.

THE PORTUGUESE POSSESSIONS in India have an estimated area of 1,610 sq. m., and a population of 527,518. They are:

1. *Goa*, on the W. coast in Bombay province.
2. *Daman*, a fortified town on the W. coast.
3. *Diu*, a small, infertile island off the peninsula of Gujarat.

FURTHER INDIA.

PHYSICAL GEOGRAPHY.

Latitude. Between 1° and 28° N. *Longitude.* Between 91° 32' and 100° E.
Area. Estimated at upwards of 750,000 sq. m.

Obs. Under the general appellation of "Further India" is here included the whole S.E. peninsula of Asia, or "The Indo-Chinese Peninsula."

POSITION AND BOUNDARIES.—Further India forms the S.E. peninsula of Asia. It is bounded on the

N. by China; E. and S. by the Chinese Sea; S.W. by the Strait of Malacca; W. and N.W. by the Bay of Bengal and Hindustan.

COASTS.—These are almost everywhere low and unbroken, save by small indentations; but they embrace some fine harbours. The chief coast features are the

1. **Capes**, Kambodia, on the S.E.; Romania, on the S.; and Negrais, on the W.
2. **Inlets**, the gulfs of Tung King (Tonquin), on the N.E.; Siam, on the S.; and Martaban, on the W.

Obs. 1. The **Gulf of Tung King** is the N.W. arm of the China Sea; it is hemmed in between the mainland and the island Hainan. It receives the large river Song Ka, and numerous small rivers, and contains the Pirate Islands, and several other island groups.

Obs. 2. The **Gulf of Siam** is a S.W. arm of the China Sea, which washes the coasts of Siam on the E., N., and W. It contains numerous islands, is land-locked, free from tempestuous winds, and possesses great facilities for navigation.

Obs. 3. The **Gulf of Martaban** is a large inlet on the E. side of the Bay of Bengal, which receives the great rivers Irawadi, Pung Lung, and Salwen.

3. Strait of Malacca.

Obs. The **Strait of Malacca** lies between the Malay Peninsula and the Island of Sumatra, and connects the Indian Ocean with the China Sea. It contains several islands, and the British settlements of Singapore, Malacca, and Penang.

ISLANDS.—The islands which skirt this peninsula are very numerous. The chief of them are Ramri, and Cheduba, near the coast of British Burma, the Andaman, and Nicobar Islands, the Mergui Archipelago, in the Bay of Bengal, and Pulo Penang, or Prince of Wales' Island, in the Malacca Strait.

Obs. 1. Ramri, a large island of British Burma, forms part of the province of Arakan. It is 50 m. long, and in its widest part 20 m. broad. Its chief town is Ramri (pop. 3663), on the S.E. side. Kyuk Phyu, is an important military station.

Obs. 2. Cheduba is also an island of British Burma, and in the province of Arakan. It produces hemp, cotton, rice, sugar, and tobacco. Its area is 250 sq. m., its population, 9000. The chief town is Cheduba, with a population of 1234.

Obs. 3. The Andaman Islands (British), in the Bay of Bengal, lie about 180 m. W. of Cape Negrais. The principal part of the group is a chain of 4 islands—North Andaman, 57 m. long; Middle Andaman, 59 m.; South Andaman, 49 m.; and Rutland Island, 11 m.—so nearly touching one another end to end, that they were long considered to be one, and were called "The Great Andaman." At a distance of 28 m., and separated from Great Andaman by the "Duncan Pass," lies "Little Andaman," which forms the S. extremity of the group. The chief productions of the group are fruits, timber, turtle, and edible birds' nests; the people are "Oriental Negroes" who wear no clothes and are savages of low type. A penal settlement was established at Port Blair in 1858.

Obs. 4. The Nicobar Islands (British), an archipelago in the Indian Ocean, lie S.E. of the Andaman islands. The chief islands are "Great Nicobar," which is above 1,200 sq. m. in extent, and "Little Nicobar," which is 86 sq. m. These are surrounded by a number of smaller islands. They are all well wooded and fertile, and yield sugar, tobacco, oranges, and cocoa-nuts. The population is estimated at 6000, most of whom are Malays.

Obs. 5. Pulo Penang or Prince of Wales' Island (British), lies near the W. coast of the Malay Peninsula, at the N. entrance of the Strait of Malacca. It has an area of about 100 sq. m., and a population of 127,000, who are chiefly Malaysians and Chinese. The chief productions are timber, rice, sugar, indigo, tobacco, coffee, betel, and ginger. The chief town is George Town, on the N.E. coast, with a good harbour. It is a military station, and has a convict establishment.

SURFACE.—The interior of the peninsula from N. to S., together with its N.W. and S.E. portions, is a great highland region, which varies in elevation from about 1,300 to 7,000 feet. Extensive lowlands, which are generally identical with the valleys of the Irawadi, Me Nam, and Me Khong, are distributed about the S. and W. sides of this region, and along the E. and W. coasts. The mountains, so far as they are known, are given under the States to which they respectively belong.

DRAINAGE.—The copious drainage of Further India is carried to the sea down two slopes which incline respectively S. towards the Bay of Bengal and the China Sea, and S.E. towards the Gulf of Tung King. The chief draining agents are the

1. **Rivers**, of which the chief are those flowing down the
 - a. *Southern Slope* into the
 - (a.) Bay of Bengal, viz., the Kuladun, Irawadi, Pung Lung, and Salwen.
 - (b.) China Sea, viz., the Me Klong, Me Nam, and Me Khong.
 - b. *South Eastern Slope*, into the Gulf of Tung King, viz., the Song Ka.

Obs. 1. The Irawadi (great river) rises among the Langtan mountains on the N.W. Chinese frontier, flows S. over a course of 1060 m. and falls into the Bay of Bengal by numerous mouths E. of Cape Negrais. It drains an area of 150,800 sq. m., traverses the Burmese Empire from N. to S., and passes the towns Bamo,

Mandale, Ava, Henizada, Bassein, and Rangun. Its chief *tributary* is the Kyen-duen, which it receives on the right bank. The river is navigable from Rangun to Bamo, a distance of 900 m.

Obs. 2. The *Salwen*, said to rise in the Chinese province of Yunnan, flows S. through Burma and part of British Burma, and after a course of 750 m. falls into the Gulf of Martaban. It drains an *area* of 62,700 sq. m. and is navigable for a considerable distance from its mouth.

Obs. 3. The *Me Khong* rises among the snows of Tibet, flows generally S.E., traversing Yunnan, Burma, Siam, Kambodia, and Cochin China. After a course of about 1700 m., it falls into the China Sea by several branches, the chief of which are the Han Giang, and the Tien Giang.

Obs. 4. The *Song Ka* rises in Yunnan, flows S.E., and after traversing that province and the Annamese Province of Tung King, falls into the Gulf of Tung King by several mouths.

CLIMATE AND PRODUCTIONS.—The *climate* is tropical, and the lowlands skirting the coasts are exposed to the most oppressive and intolerable heat. In the interior, among the mountains, the temperature is somewhat modified. During the summer the periodical rains are very heavy. The *productions* are varied and valuable.

Obs. The *productions* are specified under the various States of the peninsula.

DIVISIONS.—Further India embraces the following provinces, and colonies, viz. :—

1. BRITISH BURMA, a province of British India.
2. THE BURMESE EMPIRE.
3. THE KINGDOM OF SIAM.
4. THE EMPIRE OF ANNAM, or COCHIN CHINA.
5. FRENCH COCHIN CHINA.
6. THE KINGDOM OF KAMBODIA.
7. INDEPENDENT MALACCA.
8. THE STRAITS SETTLEMENTS, a British colony.

1.—BRITISH BURMA.

PHYSICAL GEOGRAPHY.

Latitude. Between 10° and 22° 40' N. *Longitude.* Between 92° 25' and 99° 30' E.
Area. 88,364 sq. m.

Obs. This province of British India is described here, because it lies outside Hindustan, and has physical features of its own apart from that peninsula.

POSITION AND BOUNDARIES.—British Burma lies in S.E. Asia. It is hemmed in between the Bay of Bengal on the W., and the States of Burma, and Siam on the E.

COASTS.—These are 1,100 m. in extent, and embrace some good harbours. The chief

1. *Cape* is Negrais.
2. *Inlet* is the Gulf of Martaban.

ISLANDS.—The chief of these are described on p. 155. *Obs.* 1-5.

SURFACE.—British Burma is mountainous in the N. and along the E. frontier ; but it embraces large plains in the W. and centre. There are no mountain ranges which call for description here.

DRAINAGE.—The province is drained by the Kuladun, Irawadi, Pung Lung, and Salwen. (See *Obs.* 1 and 2 above.)

CLIMATE.—This is sub-tropical and salubrious. The *summer* lasts from March to June, and the *Rainy Season* from June to October.

PRODUCTIONS include rice, sugar-cane, pepper, cotton, tobacco, indigo, jute, and timber (teak).

PEOPLE AND LANGUAGE.—The *Population* is 2,747,148, and consists chiefly of Burmese, Chinese, Hindus, &c. Their *Language* is Burmese, a monosyllabic tongue of the Tibeto-Barman group.

POLITICAL GEOGRAPHY.

POLITICAL DIVISIONS.—British Burma is divided into 3 *Divisions*, which include 15 *Executive Districts*. These divisions are 1. *Arakan*. 2. *Pegu*. 3. *Tenasserim*. The *Capital* is Rangun.

NOTES ON THE TOWNS.—The chief towns are Rangun (100,000), Moulmein (53,653), Prome (24,682), and Bassein (19,577).

Obs. Rangun, at the mouth of the Rangun arm of the Irawadi, on the Gulf of Martaban, is the capital of British Burma, the seat of government, and a fortified seaport of importance. It possesses an arsenal and a military magazine.

The chief ports are Rangun, Moulmein, Bassein, Akyab, and Mergui.

INDUSTRIES.—These are not important. Less than half the good land is cultivated, and *Agriculture* is yet in the rudest stage. Of *Manufactures*, cotton stuffs and iron goods appear to be the chief. *Commerce and Trade* employ a large proportion of the people.

COMMUNICATIONS.—Good roads are still wanting in this province. At present there are no *Railways*, and only 800 m. of *Made Road*, but there is upwards of 6,000 m. of *Navigable River*.

GOVERNMENT, RELIGION, AND EDUCATION.—The *Government* is carried on by a Chief Commissioner, and is identical in principle with that of the other Indian Provinces. The *Religion* is chiefly Buddhism. *Education* receives much attention, and is in a thriving condition.

2.—THE BURMESE EMPIRE.

PHYSICAL GEOGRAPHY.

Latitude. Between 19° 30' and 28° N. *Longitude*. Between 93° and 101° 45' E.

Area. 190,520 sq. m.

Obs. The country is 540 m. long from N. to S. and 420 m. broad.

Adjacent to Burma lie the Chinese provinces Tibet and Yunnan, on the N.; British Burma, on the W. and S.W.; Siam, on the S.E.; Yunnan and Annam, on the E.

The *Surface* is mountainous in the E. and W.; the interval between these regions is occupied by the great plain of the Irawadi. The *Mountain Ranges* on the W. frontier are the Patkoi Range, in the N.; the Yomaka Range, in the S.; along the N.E. frontier run the Gulang Sigong Mountains, and about the centre, running to the S. frontier, are the Taneng Taung Mountains. All these ranges stretch N. and S. and are of but moderate elevation.

The *Drainage* of Burma is carried into the Bay of Bengal by the Irawadi, the Pung Lung, and Salwen, and into the China Sea by the Me Khong (see pp. 155, 156).

The *climate* is tropical, but, generally speaking, healthy. The *Productions* include rice, maize, millet, pulses, yams, and a coarse species of tea, edible

birds'-nests, opium, cocoa-nuts, tobacco, indigo, cotton, ivory, &c.: *minerals*, especially iron, lead, copper, coal, and petroleum; and *precious stones*, as sapphires and rubies.

The *Population* is estimated at 4,000,000, and consists of numerous tribes speaking various languages of the Tai and Tibeto-Barman groups.

POLITICAL FACTS.

The *Chief Towns* of Burma are *Mandalé*, the capital; *Bamo*, a small stockaded town occupied by Shans and Chinese, a chief centre of commerce with China; *Amarapura* and *Ava*, former capitals of the Empire, all on the Irawadi.

The *Industries* are *Agriculture*, *Manufactures*—chiefly silk and cotton fabrics, coarse earthenware, paper, jewelry, and lacquered wares—and *Commerce*—chief exports being raw cotton, feathers, ivory, birds'-nests, horns, and gums; chief imports, silks, porcelain, copper, carpets, metals, and drugs.

The *Government* of the Burmese is an absolute monarchy; their *Religion*, Buddhism; their *Education*, tolerably general amongst the well-to-do, but confined chiefly to reading and writing.

3.—SIAM.

PHYSICAL GEOGRAPHY.

Latitude. Between 4° and 21° N. *Longitude.* Between 95° 50' and 107° 20' E.
Area. 309,000 sq. m.

Obs. Siam is 1200 m. long from N. to S., and 400 m. broad.

Siam is bounded on the N. by Burma; E. by Annam; S. by Kambodia, the Gulf of Siam, and Malacca; W. by the Bay of Bengal, and British Burma.

The *Coasts* are generally low, much indented, and fringed with numerous islands. The *Surface*, in the N. part of the interior, is a tableland of moderate elevation: on the E., S., and S.W., lie the plains of the Me Khong, Me Nam, and Me Klong. The range called the *Mountains of Siam* runs N. and S., between W. Siam and the province of Tenasserim, and continues in a S.E. direction to the end of the peninsula.

The *Drainage* is carried to the Gulf of Martaban by the Salwen, and to the Gulf of Siam chiefly by the Me Klong and the Me Nam, and to the China Sea by the Me Khong (see p. 156). The *Climate* is healthy on the tableland and along the mountains, but, in the plains and forests, malarious and injurious to health. The *Productions* include *Animals*,—viz., the tiger, leopard, bear, elephant, rhinoceros, and buffalo; the peacock, crocodiles, serpents, &c. *Vegetables*,—viz., rice, pepper, cardamoms, sugar-cane, tobacco, and fine fruits; gamboge, cotton, and valuable woods (teak, sapan, rose-wood, and aquila which is used by the Chinese as a perfume). The chief *minerals* are copper, lead, iron, tin, &c.

The *Population* is estimated at about 6,000,000. They are Siamese, Laotians, Malaysans, Chinese, &c. Their *Language* is monosyllabic, and belongs to the Tai group.

POLITICAL FACTS.

The *Administrative Divisions* of Siam number 41, viz., 5 northern provinces, 9 central, 7 western, 10 eastern, and 10 southern. Each is under a governor, but the administration is infamously bad.

The *Chief Towns* are *Bangkok*, the capital (pop. 500,000), and one of the largest trade marts in Asia; *Paknam*, the "Cronstadt" of Siam; *Ayuthia*, N. of Bangkok, the former capital, now considerably decayed; *Korat*, a trading centre of some importance, on the To Kron, about 160 m. N.E. of Ayuthia. All these are on the Me Nam.

The *Industries* include *Agriculture*, of a very elementary kind; *Manufactures* chiefly of iron, and tin making, boat-building, weaving, &c.; and *Commerce*, to some considerable extent, with Burma, China, Singapore, and Java; the chief *exports* are rice, sugar, pepper, tobacco, cotton, ivory, skins, and valuable woods; the *imports*, silk and cotton fabrics, tea, dried fruits, porcelain, and paper. The *Internal Communications* consist of navigable rivers and canals, and some fairly good roads.

The *Government* is an absolute monarchy; the *Religion*, Buddhism; but Christianity has long been propagated by both Roman Catholic and Protestant Missions. *Education*, generally speaking, does not extend beyond reading and writing, even among the upper classes.

4.—ANNAM.

PHYSICAL GEOGRAPHY.

Latitude. Between 10° 30' and 23° N. *Longitude.* Between 103° and 109° E.
Area. 198,000 sq. m.

Annam is bounded on the N. by China; E. by the China Sea; S. by French Cochinchina; W. by Cambodia, Siam, and Burma. The *coast* is low and embraces many good harbours. The *Surface*, with the exception of the valley of the Song Ka in the N., and a narrow strip along the coast from N. to S., is of a mountainous or highland character, and covered in many parts by extensive forests. The *Drainage* is carried to the China Sea by the Song Ka (p. 156, *Obs.* 4), and an almost countless number of small coast streams. The *Climate*, though hot, is healthy. The *Productions* include rice, sugar, edible birds' nests, tea, and tobacco; ivory, indigo, cotton, silk, iron-wood, teak, dye-woods, and bamboos; copper and iron. The *Population* is estimated at about 21,000,000, belongs to the Mongol stock, and speaks a monosyllabic language of the Mon-Annam group.

POLITICAL FACTS.

The Empire of Annam is divided into 34 provinces placed each under the authority of a governor. The provinces are subdivided into *Departments*, *Arrondissements*, *Cantons*, and *Communes*.

The *Chief Towns* are *Hué*, the capital, on the Hué river, which has a *population* of 30,000, and was built and fortified in the European style by French engineers; and *Kesho*, on the Song Ka, capital of the northern province Tung King, a busy river port with a *population* of 150,000.

The *Industries* are *Agriculture*, mostly performed by women; *Manufactures*, particularly ship-building, lacquered wares, and silk and cotton stuffs; and *Commerce*, which includes the *export* of the natural products of the country, and the *import* of manufactured goods, opium, and tea.

The *Government* is a hereditary military despotism, the central administration being under mandarins, who are heads of bureaux. The national *Religion* is Buddhism, but there are also several Christian Missions at work in the country.

5.—FRENCH COCHIN CHINA.

PHYSICAL GEOGRAPHY.

Latitude. Between 8° 40' and 10° 30' N. *Longitude.* Between 104° 10' and 107° 10' E.
Area. 21,630 sq. m.

French Cochinchina comprises the delta of the Me Khong and that of the Dong-Nai, and the Puto Kondor islands at the mouths of the Me Khong. It is bounded on the N. and N.E. by Annam, E. by the China Sea, and S. by the Gulf of Siam. The *Surface* is a vast area of fertile plains traversed in all

directions by the arms of the Me Khong. The *Climate* is hot and moist; the *Soil* fertile. The *Population* is estimated at 1,500,000, and consists mainly of Annamese, Kambodians, and Chinese.

Obs. Until 1859 French Cochinchina formed part of the Kingdom of Annam, or Cochinchina. In that year, however, under pretext of protecting the Christian converts, France took Saigon, made it a free port, and established a French settlement. Since that time they have annexed the territory which they now occupy between Annam and Kambodia.

POLITICAL FACTS.

The *Administrative Divisions* consist of 6 *Provinces*: 3 in the E., viz. Bien-hoa, Gia-din, and Ding-tuong; and 3 in the W., viz. Vin-long, An-giang, and Ha-tien.

The *Chief Towns* are Saigon, on the River Saigon, the capital. It is a fortified city and an important port, with a *Population* of more than 100,000, among whom are a large number of Chinese. *Mitho*, the second largest town of the colony, on the Me Khong; *Vinlong*, on the Tien Giang; *Bathak*, on the Gua Bathak; and the port of *Hatien* at the S.W. extremity of the territory.

6.—KAMBODIA.

Latitude. Between 10° 30' and 13° 45' N. *Longitude.* Between 103° and 106° 30' E.

It is *bounded* on the N. and W. by Siam; E. by Annam; S. by Cochinchina, and the Gulf of Siam. The *Coast* is low, of small extent, and fringed by many islands. The *Surface* is flat, embraces some extensive forests, and is well watered by the *Rivers* Me Khong, and Tale-Sab, which flows from *Lake* Tale-Sab into the Me Khong. The *chief Productions* are rice, coffee, sugar, spices, gums, cotton, silk, and gamboge. The *Population* is estimated at upwards of 1,000,000, and include Kambodians, Chinese, Cochinchinese, Malays, &c.

The *Chief Towns* are Udong, the nominal capital, on the Tale-Sab; *Pnompong*, the virtual capital, an important place at the confluence of the Tale-Sab with the Me Khong, and *Kampot*, a small port at the S.E. corner of the kingdom. *Industries* do not flourish, owing to the oppressions of the mandarins. The *Government* is a despotic monarchy. The *Religion* is Buddhism.

7.—INDEPENDENT MALACCA.

Independent Malacca occupies all the Malay peninsula S. of Siam, save the British province of Malacca on the W. coast. It includes several States, the chief of which are *Kedah*, *Perak*, *Salengore*, *Pahang*, and *Johore*. These States are in a chronic condition of anarchy and disorder, a source of disquiet to the Straits Government, and a hindrance to the prosperity of British traders.

8.—THE STRAITS SETTLEMENTS.

These Settlements comprise *Singapore*,¹ *Penang*,² *Province Wellesley*, and *Malacca*.³ They have an aggregate *area* of 1,445 sq. m. and a *population* of 308,097. Since 1867, they have constituted a Crown colony.

¹ Singapore was taken possession of by Sir Stamford Raffles in A.D. 1819.

² Penang was the first British settlement on, or adjoining, the Malay peninsula. It was ceded to the English by the Rajah of Kedah in 1796 for an annual money payment.

³ Malacca is one of the oldest European settlements in the East. It was taken possession of

by the Portuguese in 1511, and occupied by them till 1641, when the Dutch drove them out, and held it till 1795. The English had it from 1795 to 1818, when it was restored to the Dutch. In 1824 we obtained it again in exchange for the East India Company's settlement at Bencoolen, on the W. coast of Sumatra.

Singapore is an island at the S. extremity of the Malay Peninsula, from which it is separated by a narrow strait. Its area is 224 sq. m., and the numerous small islands adjacent to it form part of the Settlement. The *Surface* is generally low, undulating, and densely wooded; the *Climate* healthy, and the *Soil* well adapted to the growth of cocoa-nuts, spices, sugar-cane, tapioca, and fruits. The *Chief Town* is Singapore (*city of lions*), the capital and seat of government of the Straits Settlements. It lies on the S.E. coast of the island, and is a well-built and important seaport. Its *Population* is 61,752, and consists of Chinese, Malays, and Klings, or immigrants from S. India.

Penang or Prince of Wales' Island, and Province Wellesley. *Prince of Wales Island* lies 2 m. from the W. coast of the Malay peninsula and at the N. entrance of the Strait of Malacca. Its area is 106 sq. m. The *Surface* is mountainous in the N., where it reaches an elevation of 2,922 ft., in other parts level, or undulating. The *Climate* is salubrious, and the *Soil* fertile, producing rice, cocoa-nuts, coffee, sugar, spices, tobacco, indigo, gambier, and cotton: tin ore occurs at the base of the mountains. The *Population* is 61,747, consisting of Malays, Chinese, Klings, Europeans, and Americans,

Province Wellesley is a strip of territory on the W. coast of the peninsula, opposite to Penang. Its area is 236 sq. m., and *Population* 71,433. Its *Surface* is undulating, its *Climate* healthy, and its chief *Productions* rice, pepper, sugar, and cocoa-nuts. The *Chief Town* of the settlement is *George Town*, a seaport on *Prince of Wales' Island*, with a *population* of 30,729.

Malacca, lies on the W. coast of the Malay Peninsula. Its area is 640 sq. m., and its *Population* 77,756, consisting of Chinese, Malays, Indians, Eurasians, and Europeans. Its *Surface* is undulating and well wooded; its *Climate* healthy; and its chief *Productions* are pepper, valuable woods (ebony, aloe wood, &c.), ivory, and tin, of which there are rich mines at Naning. *Malacca*, the chief town, and a seaport, lies on both banks of the Malacca river, near its mouth. It possesses some good public buildings, and has a *population* of 24,370.

CHINA.

The name *China* is applied, 1. To the whole extent of the countries which constitute the *Chinese Empire*. 2. To *China Proper*.

THE CHINESE EMPIRE.

The Chinese Empire, or "The Celestial Empire," is, after Russia, the largest State in the world, and, after Siberia, the largest of the Asiatic countries. Its area is estimated at 4,538,115 sq. m., its greatest *length*, from E. to W. at about 3,000 m., its greatest *breadth*, from N. to S., at about 2,000 m. It lies in the centre of the E. side of the old continent, between the parallels 18° and 53° 30' N. lat. and, approximately,¹ between the meridians 78° 30' and 135° E. long., having Siberia, on the N. and N.E.²; the Sea of Japan, the Strait of Corea, the Yellow Sea, the Eastern Sea (*Tung Hai*), and the Strait of Formosa, on the E.; the China Sea, Annam, Burma, and Hindustan, on the S.; Hindustan, Turkestan, and Siberia, on the W. The *Population* is estimated at 434,500,000, the largest under any one government in the world. The *coast-line* is thought to be about 3,000 m. long.

The empire now comprises:—1, China Proper; 2, Leaotong; 3, Corea; 4, Manchuria³; 5, Mongolia³; 6, Tibet.

¹ "Approximately," because the W. limits are not accurately defined.

² The former Chinese territory N. of the Amur and its tributary the Argun, and E. of the Amur and its tributary the Usuri, has been ceded to

Russia by treaty.

³ Manchuria and Mongolia, together with E. Turkestan, are often classed together under the name of *Chinese Tartary*.

CHINA PROPER.

PHYSICAL GEOGRAPHY.

Latitude. Between 18° and 43° N. *Longitude.* Between 98° and 126° E.
Area. 1,553,530 sq. m.

Obs. China Proper is the richest and most populous part of the Empire.

POSITION AND BOUNDARIES.—China occupies the central part of E. Asia. It is bounded on the

N.¹ by Mongolia, and Manchuria. E. by Corea, the Yellow, and Eastern Seas, and the Strait of Formosa. S. by the China Sea, Annam, and Burma. W. by Tibet, and E. Turkestan.

COASTS.—The coasts are low, but interspersed with reaches of a bold and rocky character. They extend above 2000 m., and include numbers of excellent harbours. They are begirt with islands and, in places, so thickly that navigation is rendered perilous by them. The most notable coast features are the

1. **Capes**, Liao-Thie-Schan, and Cod.
2. **Inlets**, the Gulfs of Leao-tong, and Pechili; and the Bays of Corea, Hang-Chow, Bias, and Mirs.
3. **Straits**, the Strait of Pechili, joining the Yellow Sea and the Gulf of Pechili; Strait of Formosa, leading from the Eastern Sea to the China Sea; and Hainan Strait, leading from the China Sea to the Gulf of Tung King.

ISLANDS.—The chief islands of China Proper are Tsung Ming, Chusan, Formosa, Hong Kong, and Hainan.

Obs. 1. **Formosa** (Chin. *Tai-wan*) in the China Sea, about 100 m. E. of the Fo-kien province, of which it forms a part. Its area is 13,100 sq. m. Its *Coasts* are rocky and dangerous, but embrace some very good harbours. The *Surface* is divided, substantially, into two parts by the Muh-kan-shan Mts., which run from N. to S. The E. side is occupied by aborigines of the island, who are savages; the W. side covers an area of some 6,250 sq. m., and is occupied by Chinese. Its *Climate* is genial and healthy, and the *Soil* is rich. The *Productions* include rice, sugar, tea, camphor, indigo, coal, and other valuable commodities. The *Capital* is Taiwan-fu, which is situated near the W. coast.

Obs. 2. **Hong Kong**² (*Fragrant Stream*) is at the mouth of the Canton river, about 40 m. E. from Macao. It is an irregular ridge, stretching nearly E. and W.; its broken and abrupt peaks rising in places to a great height above the sea level. It is 29 sq. m. in extent, and is separated from China by the Ly-ee-Moon Pass. The island, together with the opposite peninsula of Kow-loon, forms the British colony of Hong Kong. The *Population* is 121,985, all of whom, except about 5,000 Europeans and Americans, are Chinese. Hong Kong is valuable to Great Britain chiefly as a factory for our commerce with China, and as a military and naval station for the protection of that commerce. The *Chief Towns* are Victoria, the capital, a free port on the N. coast, and Stanley, on the S. coast.

SURFACE.—Two thirds of China Proper, the Western parts from N. to S., are mountainous; the S.E. districts are hilly; the N.E., low and flat. The principal surface features are the

1. **Mountains**, the chief of which are the
 - a. *Yun-ling*, which runs N. from the Yang-tsze-Kiang to the Hoang-Ho,

¹ The celebrated, but useless rampart termed the "Great Wall" of China, stretching from the Yellow Sea to the 98th meridian, defines the N. boundary. It is about 1,600 m. long, and in parts

about 30 ft. high.

² Hong Kong was ceded to Great Britain in 1841, and was erected into a colony in 1843. Kow-loon was ceded to Great Britain in 1861.

forms the E. buttress of the lofty tablelands of Central Asia, and includes many snowy peaks.

b. Pe-ling or Northern Mts., which branch off from the Yun-ling, and stretch E. to the 112th meridian, where they break up into several lower ranges, the chief of which, *Ton-shia-Shan* range, runs S.E. to the banks of the Yang-tze-Kiang. The Pe-ling range forms part of the great water-parting between the Hoang Ho and the Yang-tze-Kiang.

c. Ta-pa-ling, which lies S. of the Pe-ling, and stretches from W. to S.E. between the Yang-tze-Kiang, and its N. tributary the Han-Kiang.

d. Nan-ling or Southern Mts., which run E. from the Yun-ling, and bound the basin of the Si-Kiang or Canton river on the N. Many of its peaks are said to rise above the snow line.

e. Yu-ling, which also branches towards the E. from Yun-ling; it forms the S. boundary of the Si-Kiang.

2. **Plains**, of which there are many on the coasts, and among the hills of the S.E. The chief one is the

Great Plain of China, which occupies the N.E. of the country, and covers an area of 210,000 sq. m. It is 700 m. long, and from 150 m. to 400 m. broad. It is traversed by the Hoang-ho, and Yang-tze-Kiang, the district between these rivers being low, swampy, and studded with lakes.

DRAINAGE.—The somewhat copious drainage of China Proper is carried down one vast slope which inclines E. towards the Pacific Ocean. The principal draining agents are the

1. **Rivers**, of which the most important are the *Pei-Ho*,¹ *Hoang-Ho*,² *Yang-tze-Kiang*,³ and *Chu-Kiang* or *Canton River*.

Obs. 1. The *Pei-Ho* (*White River*) is formed by the union of the *Haen-Ho* and *Yun-Ho*, and falls into the Gulf of Pechili.

Obs. 2. The *Hoang-Ho* (*Yellow River*) has its sources among the N. slopes of the *Nan-Shan Mts.* in long. 97° E., and is one of the most important rivers in Asia. Its length is 2,270 m., and it falls into the Gulf of Pechili. Its chief tributaries are the *Wei-Ho*, and the *What-Ho*.

Obs. 3. The *Yang-tze-Kiang* (*Son of the Ocean*) is formed by the union of three streams in the N. of Tibet, near the 80th meridian E., flows first S.E. and then N.E. to its outlet in the Yellow Sea. Its length is 3,450 m., and the area of its basin 800,000 sq. m. Its chief tributaries are the *Han*, on the left bank, and the *Heng*, and *Kia* on the right.

Obs. 4. The *Chu-Kiang* (*Pearl River*) or *Canton River* is the common estuary of the *Pe-Kiang*, and *Si-Kiang*.

2. **Lakes**, of which the chief are *Toon-ting*, *Poo-Yang*, and *Tao*. They all lie on the right bank of, and are drained by, the *Yang-tze-Kiang*.

CLIMATE.—The climate of China is characterised by extremes. The temperature is low as compared with the geographical position of the country. In the N. the *summers* are genial; and though the *winters* are cold they are dry. In the interior the climate is more equable; in the W. the cold from the mountains is much felt; while on the E. littoral, the natural asperity of the climate is considerably tempered by the sea.

PRODUCTIONS.—The chief productions of China are tea, silk, bamboos, cotton, indigo, rice, paper, and drugs—especially camphor,

¹ *Ho* and *Kiang* are Chinese words for "river."
² The *Hoang-Ho* takes its name from the vast quantities of yellow mud which it brings down.

³ The *Yang-tze-Kiang* is also called *Ta-Kiang* (= "the great river") and *Kiang* (= "the river").

rhubarb, ginseng, and poppies ; mercury, arsenic, coal, and salt, are found in various parts ; lapis lazuli, in the W. provinces.

PEOPLE, AND LANGUAGE.—China proper has an estimated population of 404,946,514, who are nearly all Chinese and speak the Chinese language. Europeans and Americans make up the remainder.

POLITICAL GEOGRAPHY.

POLITICAL DIVISIONS.—China Proper is divided into 18 *Provinces*; but since the conquest of the empire by the Mandchus, the trans-mural province of *Shing King*, or *Leao-tong*, has been added. These with their chief towns are as follows :—

PROVINCES.	CHIEF TOWNS.	PROVINCES.	CHIEF TOWNS.
1. <i>Leao-tong</i>	<i>Moukden</i> , <i>Tien-tsin</i> .	11. <i>Se-chuen</i>	<i>Ching-too</i> .
2. <i>Pe-chi-li</i>	<i>Peking</i> .	12. <i>Hoo-nan</i>	<i>Chang-sha</i> .
3. <i>Shan-tung</i> ..	<i>Tsi-nan</i> .	13. <i>Quei-chow</i> ..	<i>Quei-yang</i> .
4. <i>Shan-se</i>	<i>Tai-Yuen</i> .	14. <i>Che-kiang</i>	<i>Hang-chow</i> , <i>Ning-po</i> .
5. <i>Shen-se</i>	<i>Si-ngan</i> .	15. <i>Fo-kien</i>	<i>Foo-chow</i> , <i>Amoy</i> .
6. <i>Kan-su</i>	<i>Lan-chow</i> .	16. <i>Kiang-ai</i> ..	<i>Nan-chang</i> .
7. <i>Kiang-su</i>	<i>Nan-king</i> , <i>Shanghai</i> .	17. <i>Quang-tung</i> ..	<i>Canton</i> , <i>Macao</i> .
8. <i>Ho-nan</i>	<i>Kai-fong</i> .	18. <i>Quang-se</i>	<i>Quei-ling</i> .
9. <i>Ngan-whi</i>	<i>Ngan-king</i> .	19. <i>Yun-nan</i>	<i>Yun-nan</i> .
10. <i>Hoo-pe</i>	<i>Wo-chang</i> , <i>Hankow</i> .		

NOTES ON THE TOWNS.—The five most populous towns are *Peking* (1,650,000), *Canton* (1,500,000), *Tien-tsin* (950,000), *Hankow* (600,000), and *Foo-chow* (600,000).

Obs. Peking (*Court of the North*), the metropolis of China, lies about 100 m. N.W. of the Gulf of Pechili. It consists of two cities, each of which is encircled by high walls; the one to the N. being called the Interior, or Tartar city, and the one to the S. the Exterior, Chinese, or commercial city. Together they are 25 m. in circumference, and occupy an area of 28 sq. m. The N. city consists of three separate enclosures, the inner one containing the public and private palaces of the emperor; the middle one containing the public buildings; and the outer one, the trading community and several supreme tribunals of the Empire. The chief industries are printing, and the manufacture of coloured glass, idols, &c.

The chief ports are *Canton*, *Tien-tsin*, *Hankow*, *Foo-chow*, and *Shanghai*. The chief industrial centres are *Peking*, *Canton* (iron, brass, wood, and stone-work), *Foo-chow* (mining, cottons, porcelain, &c.), *Shanghai* (muslins, flowered silks, artificial flowers, gold, silver, and ivory wares), and *Soo-Chow* (silks, printing, &c.).

INDUSTRIES.—*Agriculture* is followed by the majority of the people, tea, rice, and vegetables being the principal objects of culture. *Manufactures* are mainly domestic, and include porcelain, silk, and cotton fabrics, paper, engraving, bell-casting, lacquered, and carved wares. *Commerce* is vast and varied, and includes the export of tea, silk, raw cotton, cotton stuffs, paper, ivory, and lacquered wares, salt, and borax ; and the import of cotton and woollen goods, opium, wheat, spices, edible birds' nests, &c.

COMMUNICATIONS.—China is traversed in all directions by 20,000 *Imperial Roads*, and although they are, generally speaking, but badly kept, an enormous internal trade is carried on over them. An extensive system of *Navigable Rivers* and *Canals* compensates, to some extent, for the lack of good roads.

GOVERNMENT, EDUCATION, AND RELIGION.—The *Government* of the State is based upon that of the family, and the Emperor is both temporal and spiritual sovereign. *Education* is under the superintendence of government officers, and is universal, and literary acquirements are made the test of fitness for all State employments. The *Religion* of the State and of the upper classes is Confucianism; that of the lower classes is mainly Buddhism, or the religion of Fo. Christianity is being actively propagated by missionaries of various denominations.

Obs. The administration of the empire is under the supreme direction of the *Interior Council Chamber*, which consists of 4 members, and 2 assistants from the Great College, who have to see that everything is done according to the civil and religious laws of the empire.

MANDCHURIA.

This division of the Empire lies in the N.E., covers an area of 306,700 sq. m., and is bounded by Russia on the N.W., N., and N.E.; by Corea, and the province of Leao-tong on the S.; and by Mongolia, and Russia on the W. The surface is mountainous in the W., N., and E.; the chief mountains are the Khingan, in the W.; the Ilichuri Alin, in the N.; and the Shan Alin ranges in the E. Mandchuria is copiously watered, being traversed by the Amur, on the N., and by the Sungari, and Usuri, tributaries of the Amur, in the centre and S.E. respectively. The climate is one of extremes, being excessively hot in summer, and very cold in winter; and the chief productions are wheat, barley, rye, hemp, cotton, ginseng, and rhubarb. The population is 12,000,000, and consists of Chinese and Mandchus principally. Mandchuria is divided into two great provinces by the Sungari River, viz., Kirin Oola in the S.E.; and Helung Tsian in the N.W. The chief towns are Kirin Oola, capital of the province of the same name, on the right bank of the Upper Sungari; and Tai-tsi-har, capital of the Helung Tsian, on the Nonni river. The chief industries are agriculture and boat-building.

COREA.

Corea consists for the most part of a great peninsula which projects S. between the Sea of Japan and the Yellow Sea. Its area is estimated at upwards of 91,398 sq. m. The interior of the country is but little known. Near the coast, from N. to S., runs the Pepi Shan Mountains, and on the N. frontier the Shan-jan Alin range. The chief rivers are the Ura, and the Tiumen. The climate is, generally, severe; the chief productions, grain—rice, wheat, millet—wine, fruits, tobacco, ginseng, etc. The population is estimated at 8,500,000, and is of Mongolian origin. The capital is Kiung, in the S.W. of the peninsula. The chief industries are agriculture and commerce. The government of the country is an absolute monarchy; the religion is Buddhism; education is general and keenly appreciated.

MONGOLIA.

Mongolia is an extensive tract of country in the E. part of Central Asia. Its area is said to be 1,303,630 sq. m. It lies between the parallels 38° and 53° N. lat., and between the meridians 84° and 124° E. long., having Siberia on the N.; Manchuria and Leao-tong on the E.; China Proper on the S.; and Turkestan on the W. The *surface* is mountainous in the N. and N.W.; the great desert of Shamo or Gobi occupies the centre. The chief *Mountain Ranges* of the N. region are offshoots of the Altai system; the S. region is occupied by the Ala Shan Inshan ranges; while the E. is traversed from N. towards S.W. by the Khingan range. The great desert of Shamo is described p. 123. The *rivers* belong almost entirely to the two mountainous districts, and comprise, in the N., the Upper Yenisei, Selenga, and Kerulen; in the S. the middle course of the Hoang Ho. The *climate* is dry, harsh, and inhospitable; and the chief *productions* are wheat, barley, and coarse grass. The *population* is about 2,000,000, and consists of various Mongolian tribes, some of which are nomadic and others settled. The country, or rather the population, is divided into 3 *Nations*, viz., the Khalkas, in the N.; the Sunnit, in the centre; and the Tahakhar, in the S. These nations are divided and subdivided for purposes of civil and military administration. The chief *town* is Urga, the capital and residence of the Lamas or Buddhist priests, near the N. frontier. The *communications* are mere caravan tracks. A large transit trade is done between China and Russia through the Mongol traffickers, who exchange their camels, horses, oxen, and sheep with the Chinese for tea, spirits, tobacco, cotton goods, &c.

TIBET.

Tibet is a vast highland region of Central Asia, extending over an estimated area of 651,528 sq. m. It lies between the parallels 27° 40' and 36° 10' N. lat. and between the meridians 78° and 104° E. long., having Turkestan and Chinese Mongolia, on the N.; China Proper on the E.; China Proper and Hindustan on the S.; and Kashmir on the W. The *surface* is traversed in all directions by stupendous and rugged mountains. In the S. are the Himalayas (p. 122); in the N. the Thian Shan, or Celestial Mountain (p. 122); on the E. frontier are the Yun-ling Mountains; near the W. frontier the Tise-Gangri Mountains. The Dzang Mountains traverse the interior of Tibet from E. to W., and cover vast regions in both those quarters by their mighty ramifications. Many of the largest *rivers* of Asia take their rise in Tibet, as the Brahmaputra (p. 149, *obs.* 1) and Yang-tze-Kiang (p. 163, *obs.* 3), which flow E.; the Indus (p. 149, *obs.* 3), and the Sutlej, which flow W. Much of the drainage of the interior is received into *lakes*, the chief of which are Tengri-Nor in the centre of the plateau, and Buka-Nor, a few miles N.E. from Tengri-Nor. The *climate* is dry and almost everywhere excessively severe because of the great elevation of the plateau; the *productions* include the yak, and argali: gold, precious stones, and borax. The *population* is about 6,000,000, and consists, for the most part, of Mongolians.

The *administrative divisions* are very imperfectly understood by Europeans; the chief of them are E. Tibet, with capital Lassa; and W. Tibet, with chief town Teshu-Lombu. The principal *industries* are cattle-rearing, and agriculture; manufactures are confined to things for home use, but traffic is extensive between Tibet and China. *Communications* are very indifferent, and the transit of all merchandise is carried on by horses, mules, and other beasts of burden. The *government* is chiefly sacerdotal, the highest native authorities being the chief Lama, who lives at Lassa; and the second Lama, who resides at Teshu-Lombu. The active secular government devolves upon a Rajah and four ministers. The *religion* is Buddhism, which has its head-quarters in Tibet.

TURKESTAN.

Obs. The part of Central Asia here called Turkestan, extends from China Proper on the E., to Russia on the W.; from Russia on the N., to Tibet, Hindustan, Afghanistan and Persia on the S.; and consists of two well marked divisions, which are called respectively E. and W. Turkestan.

EASTERN TURKESTAN.

Eastern Turkestan forms the W. province of the Chinese Empire. Broadly speaking, it lies between the parallels 35° and 44° N. lat., and between the meridians 73° 30 and 94° E. long., having China Proper on the N.E. and E.; Tibet on the S.; Hindustan on the S.W.; W. Turkestan and the Khanate of Kokand on the W. The *surface* is mountainous in the S.W., W., and N.; but sandy and sterile deserts compose much of the interior. The mountains send down fertilising rivers charged with rich alluvial soil, but the deserts absorb them; the great artery of the Djetyshar *drainage system* is the *Tarim* or *Ergu*, which is formed by the union of the Kizil Kungel, Kizil Su or Kashgar river, Zarafshan or Yarkand River, and the Khotan River: it then flows E. through the great desert of Gobi, and falls into Lob Nor. It is 1500 m. long, and fetches its waters from the Thian Shan, the Kizil Yart, Karakoram, and Kuen Lun Mountains. The *Yulduz River*, which drains part of the N. mountainous region, also flows E., and falls into the Bostu Lake, which lies about 100 m. N. of Lob Nor. The chief *productions* are silk, cotton, jade, wool, and horses. The *population* is supposed to be under a million, and consists of Aryans, Turgans, Chinese, and Black Kirghizes. The country contains 15 *Districts*. Kashgar, Yarkand, and Aksu are important commercial towns. The chief *industries* are agriculture, commerce and manufactures of cotton, woollen, and silk goods, paper, and leather. The *communications* are good trade routes which traverse the country in all directions between Russia and China. Of *education* there is not much: the *religion* is Mohammedanism.

WESTERN TURKESTAN.

W. Turkestan is a vast and important region of Central Asia, covering an area of about 500,000 sq. m., having Russia on the N. and W.; Eastern Turkestan on the E.; and Afghanistan on the S. The *surface* is mountainous in the E.; the W. part consists of a continuation of the great Siberian plain and includes the desert of Khiva or Kara Kum; while the regions between these extremes is a terraced tableland traversed by a series of parallel valleys, which run from N. to S. The *slope* of this great region inclines N.W. towards the Sea of Aral, into which flows the greater part of the drainage of W. Turkestan. The chief *rivers* are the Narin or Upper Sir Daria; and the Amu Daria or Oxus (p. 128, *obs.* 4). The *climate* is very diversified, as might be expected in a country which falls from an elevation of 19,000 ft. (*Mt. Shchurof* in the N.E.) above the sea, to a depression of 83 ft. (about the Caspian) below the sea. The summers are excessively hot, and dry; the winters, prolonged and bitterly cold. The chief *productions* are the yak, pamiir sheep, and wild horse; the vine in Bokhara, silk, and cotton, on the banks of the Amu Daria; wheat, rice, millet, maize, barley, tobacco, and hemp on the various river courses; lapis lazuli, rubies, and salt occur in various parts. The *population* is about 6,000,000, and consists of settled and nomadic Turks who belong to the Mongolian race, and speak *languages* belonging to the Turanian family. The *political organisation* of this region is extremely loose and unsettled; there are the nominally inde-

pendent sovereignties of Bokhara and Khiva, and several semi-independent states, but of their constitution and internal administration we have no definite knowledge. The chief towns are Bokhara, and Khiva, two of the most important places in Asia. The country is traversed by trade routes from Russia, Persia, Afghanistan, India, and China. The chief industries are commerce, cattle rearing, agriculture, and manufactures—chiefly silk and cotton fabrics, carpets, arms, and cutlery. The commerce consists mainly in the barter of tea, musk, porcelain, wool, rhubarb, shawls, brocades, opium, and sugar, for European manufactured goods. There is a large traffic also in slaves. The governments are autocratic, but conducted under the injunctions of the Koran; the religion of the people is Mohammedanism; and education is provided for by schools in all the chief towns.

JAPAN.

PHYSICAL GEOGRAPHY.

Latitude. Between 20° 30' and 46° N. *Longitude.* Between 129° and 151° E.
Area. 146,586 sq. m.

Obs. The empire is said to comprise 3,850 islands and islets; but the most important of them are, going from N. to S., the Kurile Chain, Yezo, Nipon, Shikoku, Kiushiu, and Loo-choo islands.

POSITION, AND BOUNDARIES.—Japan lies in the Pacific Ocean off the E. coast of Asia. It is bounded on the

N. by the Sea of Okhotsk. E.; and S.E.; by the Pacific. S.W. by the Chinese Sea. W. by the Corea Strait, and the Sea of Japan.

COASTS.—These are, generally speaking, irregular, and, in places, deeply indented by the sea. Their chief features are

1. **Capes**, Sova, and Sirtoko, on the N., Noshamu, and Erimo, on the E. of Yezo; Torii, and Tatsutobi, on the N., and Sudzu, on the W. of Nipon; Muroto, on the S. of Shikoku; and Satano, on the S. of Kiushiu.
2. **Inlets**, in Yezo, the Bays of Volcano, on the S.W.; and Ishikari, on the W. In Nipon, the Bays of Aomori, on the N.; Sendai, on the E.; Yedo, Kawatsu, Suruga, and Mia, on the S.; Myku, Wakasa, and Toyama, on the W.
3. **Straits**, Tsugaru, between Yezo and Nipon; Kii, between Nipon and Shikoku; Shimonoseki, between Nipon and Kiushiu; and Van Diemen, S. of Kiushiu.

SURFACE.—The Japanese islands are covered with mountains, many of which are volcanic, and many crowned with perpetual snow. The loftiest summit, *Fusi-Yama* (12,400 ft.), lies 80 m. S.W. of Yedo, and near the S. coast of Nipon; this mountain and *Haku-Yama* (9,185 ft.) in nearly the same latitude, but near the W. coast, are active volcanoes.

DRAINAGE.—Japan is well watered, but the rivers have short courses, and swift currents, and are navigable only for a short distance from their mouths. The chief draining agents are the

1. **Rivers**, of which the chief are

a. In Yezo, the Ishikari, which flows S.W. into Ishikari Bay.

b. In *Nipon*, the Kitakami, which runs S. into Sendai Bay; the Tone, and Sumida, which fall into Yedo Bay; the Kiso, which flows to Mia Bay; and the Yodo, which falls into the Idzumi Sea.

c. In *Kiushiu*, the Kawachi, which flows W. into the Chinese Sea.

2. **Lakes**, the chief of which is Biwa (so called from its likeness in figure to the musical instrument of that name), which lies in the S.W. of Nipon, and is regarded by the natives with reverential awe.

CLIMATE, SOIL, AND PRODUCTIONS.—The *climate*, generally speaking, is salubrious. In the N. Isles, however, the temperature is very rigorous. The summer heat is tempered by sea breezes. The rainy season is accompanied by almost continual thunder and earthquakes, and fearful storms are frequent, and sometimes disastrous. The *Productions* include rice, tea, ginger, camphor, and tobacco; silk, cotton, hemp; valuable woods, as ironwood, cypress, and oak; and copper, iron, coal, salt, sulphur, and amber.

PEOPLE, AND LANGUAGE.—In 1874 the *Population* was 33,623,379. They are of Mongolian origin, and are characterised by large heads, short necks, small hands and feet, black hair, yellow skin, and obliquely-set eyes. Their *Language* belongs to the Turanian family, but it differs from the Chinese language.

POLITICAL GEOGRAPHY.

ADMINISTRATIVE DIVISIONS AND TOWNS.—The Empire, for administrative purposes, is divided into 36 *Ken* (Government Districts), and 3 *Fu* (Residential Districts). The *Fu* are *Tokio*, *Osaka*, and *Kioto*.

Obs. The island *Yezo* is under the administration of the Colonization Department.

NOTES ON THE TOWNS.—The most important towns are *Tokio* (595,905), *Kumamotu* (300,000), *Kioto* (238,663), *Osaka* (281,119), *Kagosima* (200,000), *Yokohama* (61,553), *Kanagawa* (60,000), and *Nagasaki* (47,412).

Obs. 1. **Tokio** or **Yedo**, the capital of the empire, and chief residence of the Tycoon or secular Emperor, lies on the N.W. shore of the bay of Yedo on the E. side of Nipon. The city is of vast extent, having, with its suburbs, a *population* of 1,036,771. The houses are built chiefly of wood, and many of the principal streets are traversed by canals which are bordered by rows of trees. The royal palace is an immense and magnificent building. The city possesses a rich library, and many public edifices of great beauty.

Obs. 2. **Kioto** or **Miako**, the ecclesiastical capital of the Empire, "the Paradise of Japan," and the principal residence of the *Mikado*, or Spiritual Sovereign, lies about midway between the head of Osaka Bay, and Lake Biwa, near the S. end of Nipon. It is the centre of literature, of sciences, and of arts, and possesses many temples and edifices which are remarkable for their size and beauty. The most celebrated temple is the "Fokosi," which contains a colossal statue of Buddha; the chief public edifice is the palace of the Mikado. The town also possesses numerous *manufacturing* and educational establishments.

The chief ports and industrial centres are *Yokohama*, *Osaka*, *Hiogo*, *Nagasaki*, and *Hakodadi*.

INDUSTRIES.—The people devote themselves almost exclusively to *Agriculture*, but as only a tenth part of the soil is under cultivation,

the appearance of the country is poor. *Manufactures* include arms, porcelain, lacquered and japanned wares, toys, &c., but they form but an insignificant part of the national industries. *Commerce* is active and embraces the *export* of silk, tea, rice, and camphor ; and the *import* of cotton and woollen stuffs, metals, &c.

COMMUNICATIONS are very defective. Most of the *Roads*, except a few on the coast, are useless for traffic. There are 66½ m. of *Railway* open for traffic, and new lines are being constructed ; also 1,834 m. of *Telegraph Lines*.

GOVERNMENT, RELIGION, AND EDUCATION.—The *Supreme Power* belongs to the "Mikado" (*Emperor*), to whom all the Princes of the Empire are subject. *Education* is very general, and is making rapid progress under the Board of Public Instruction, which was appointed in 1871. Numbers of students are also sent at the public expense, to be educated in America and in Europe. The prevailing *Religion* is Buddhism, but the old religion of the country is termed Sin-sin or Sinto, and is connected with the sun ; Confucianism has also gained great numbers of followers.

AFRICA.

PHYSICAL GEOGRAPHY.

Latitude. Between 34° 49' S. and 37° 40' N. *Longitude.* Between 17° 30' W. and 51° 22' E.
The *Area* is estimated at 11,553,924 sq. m.

Obs. 1. Africa, though second in point of size, is the least civilised, and politically the least important of the great divisions of the globe. It forms a vast peninsula of the old Continent, being joined to Asia by the Isthmus of Suez and surrounded by the sea in all other directions. Until very recent times Africa has continued to be, both politically and commercially, comparatively unknown; and even now the only parts of which we have any accurate topographical knowledge are the British possessions in the S., the French, and Portuguese Possessions, and the Turkish Dependencies of Egypt and Tunis in the N. The *general characteristic features* which strike an observer on perusing a map of Africa are 1. Its *irregularity of form*, the N. half rounding off, the S. half contracting and terminating in a point. 2. The *parallelism of its mountains* both to the sea-coast, and in their own structure. 3. Its *isolation and inaccessibility*, which are owing to the ironbound character of the coast line, the want of navigable rivers, the littoral situation of the mountain chains, the broad expanses of desert between the coast and the interior, and the insalubrious and, in many cases, deadly climate.

Obs. 2. The *extreme points* of this peninsula are Ras-el-Kerun, on the N.; Cape Agulhas, on the S.; Cape Verde, on the W.; and Cape Guardafui, on the E.

POSITION AND BOUNDARIES.—Africa forms the S.W. part of the Old Continent; it is bounded on the

N. by the Strait of Gibraltar and the Mediterranean. N.E. by Asia and the Red Sea. E. and S. by the Indian Ocean. W. by the Atlantic.

COASTS.—These are remarkable for their unbroken regularity. The length of *Coast-line* is estimated at 12,561 m., or only 1 m. of coast to every 895 sq. m. of area. The chief features are the

1. **Capes** Sparte, Blanco, Bon or Adar, on the N.; Guardafui, Hafoon, Delgado,¹ Corrientes,² and St. Lucia, on the E.; Agulhas,³ and Good Hope,⁴ on the S.W.; Castle, Frio, Negro, Lopez, Formosa, Three Points, Palmas, Verde, Blanco, Bojador, Nun, Ghir, and Cantin, on the W.
2. **Inlets**, the Gulfs of Tunis, Cabes, and Sidra, on the N.; the Bays of Formosa, Sofala, and Delagoa, on the E.; of Algoa, Plattenburgh, and St. Sebastian, on the S.; False Bay, Table Bay, and St. Helena Bay, on the S.W.; Walfisch Bay, Great Fish Bay, the Bights of Biafra, and Benin, on the W.
3. **Straits and Channels**, viz. the Strait of Bab-el-Mandeb, which leads from the Bay of Aden to the Red Sea; and the Mozambique Channel, which lies between the mainland and the Island of Madagascar.

ISLANDS.—The principal islands of Africa are Socotra, the Seychelle or Mahé Archipelago, the Amirante Islands, Pemba, Zanzibar, Mafia, the Comoro Islands, Madagascar, and the Mascarene Islands, off the E. coast in the Indian Ocean; St. Helena, and Ascension, in the S. Atlantic; the *Spanish Islands*, Annobon, and Fernando Po; and the *Portuguese Islands*, St. Thomas, and Princes Islands, in the Gulf of

¹ Delgado—"sharp," or "pointed."
² Corrientes—"currents."
³ Agulhas—"needles."

⁴ Cape of Good Hope, was so called by John III. of Portugal in lieu of its former title, "Stormy Cape."

Guinea: the Bisagos Islands, the Cape Verde Islands, Canary Isles, Madeira Islands, and the Azores, in the N. Atlantic.

Obs. 1. Socotra, 150 m. N.E. of Cape Guardafui, has an area of 1100 sq. m., and a population of 5000, who are Arab settlers and Bedouins. The parts skirting the sea are very fertile, and produce aloes, gums, tamarinds, dates, millet, tobacco, &c. The Indian government occupied the island in 1878.

Obs. 2. The Seychelles are a group of some thirty islands, of which *Malé* is the largest. They belong to England, and have a population of about 7000. The characteristic productions are the coco de mer, palms, and dates.

Obs. 3. Zanzibar lies between 30 and 40 m. from the E. coast, and forms the chief part of the Sultanate of Zanzibar. Its area is about 600 sq. m., and its population about 300,000, most of whom are Negroes. The island is exceedingly fertile, and yields millet, fine fruits, rice, sugar, cocoa nuts, spices, and vast quantities of timber. Zanzibar, the capital, has a population of 60,000, and is the chief market in the world for the supply of ivory, cloves, and gum-copal.

Obs. 4. Madagascar, separated from the E. coast by the Mozambique Channel, is the third largest island in the world. It is nearly 1000 m. long and 350 m. broad, and has an area of 228,312 sq. m. The interior of the island is an elevated region of from 3,000 to 5,000 ft. high. Surrounding these highlands is a level country from 400 to 500 ft. above the sea. A belt of virgin forest from 15 to 20 m. broad skirts the coast all round. The largest river is 300 m. long. Productions are rich and varied, comprising rice, sugar, manioc, tobacco, indigo; gold, silver, lead, iron, and coal. The population, 2,500,000, are chiefly Malayese and Negroes. The capital, is Antananarivo, a large town of 75,000 souls, near the centre of the island. The chief port, Tamatave, is on the E. coast.

Obs. 5. The Mascarene Islands, or Mauritius group,¹ consists of three principal islands, viz., Mauritius, Bourbon, and Rodriguez.

*Mauritius*¹ or the *Ile of France*, lies E. of Madagascar. It belongs to Great Britain, and has an area of 700 sq. m. It is mountainous, well wooded, and healthy, but subject to destructive hurricanes. The principal product is sugar. The population amounts to 340,000, including large numbers of Indians and Europeans. It is the seat of a Colonial Government, and has Port Louis, on the N.W. coast, for its capital.

Bourbon lies to the S.W. of Mauritius, and is a French colony. Its area is more than 800 sq. m., and near the coast it is generally fertile. The chief products are sugar, coffee, rice, maize, tobacco, and dye-woods. It has an active volcano—*Piton de la Fournaise* (7218 ft.)—and many extinct ones. St. Denis, the capital, is on the N. side of the island.

Obs. 6. St. Helena lies 1200 m. from the W. coast of Africa, and belongs to Great Britain. Its area is something less than 50 sq. m. It was the place of Napoleon's exile (1815—1821) and death. Its capital and chief port is James Town, on the N.W. side of the island.

Obs. 7. Ascension Island, so called because it was discovered on Ascension Day in 1501, lies 800 m. N.W. of St. Helena, has an area of 35 sq. m., a population of about 400, and belongs to Great Britain. It is famous for its turtle and bird's eggs, and is a convenient place for provisioning ships.

Obs. 8. Fernando Po (so named after its discoverer, *Fernao do Pao*, a Portuguese), lies near the W. coast in the Bight of Biafra. It is a mountainous and well wooded island of 45 m. long, and from 5 to 15 m. wide. Its chief productions are monkeys, wild goats, sheep, and timber. Its population is said to be about 14,000, who are negroes. The island was ceded to Spain in 1778.

Obs. 9. The Cape Verde Islands are a group of 14, which lie W. of Cape Verde. Their total area is more than 1600 sq. m.; they are mountainous and fertile, yielding coffee, maize, cotton, and tropical fruits. Santiago, which contains the chief town, Porto Praya, is the largest island. The group belongs to Portugal, and has a population of nearly 90,000.

Obs. 10. The Canary Isles, the *Azores*, and the *Madeira Isles* are described p. 72, *Obs.* 2, 3, and 4.

SURFACE.—Africa has been called “a land of deserts,” a region of extensive plains, which, in some places, are low and open to the sea, in others, high and cooped up between mountain ranges, and elsewhere rising from the sea level in a series of terraces: generally speak-

¹ Mauritius was so called by the Dutch, the first settlers, in honour of their prince Maurice.

ing, the plains of the interior are low, in places even much depressed in the N. parts of the country; while in the S. regions they are high, but descend from the littoral ranges on either side, till in the middle they form an elevated and wide-spreading valley. The principal surface features are the

1. **Mountains**, which are remarkable for their singular parallelism to the coasts. They may all, except the N. and interior ranges, be regarded as connected with the great highland region of the South, and may be grouped as in the following table, under the coasts to which they are parallel.

CHIEF MOUNTAIN SYSTEMS AND RANGES.	DIRECTION AND POSITION.	CHIEF SUMMITS.	
		NAMES OF.	HEIGHT IN FEET.
1. South Coast System	Which belongs to the great highland region of S. Africa.		
1. Nieuwveld Mts...	Running E. and W. midway between the Orange River and the sea.	<i>Compass Berg</i> ..	8,500
2. Zwarte Bergen ..	Running E. and W. between the Nieuwveld Mts. and the sea.	<i>Little Zwarte Berg.</i>	7,628
2. East Coast System.	Which runs parallel to the E. coast from N. to S.		
1. Drakenberg	Which emanates from the great S. ranges, and stretches N.E.	<i>Cathkin Peak</i> ..	10,357
2. Lupata Mts.	Stretching N. and S. between the Limpopo and Zambesi rivers.	<i>Mt. Milanje</i> ..	8,000
3. Kilimanjaro Mts..	Which run N. from lat. 10° S. to lat. 10° N.	<i>Kilimanjaro</i> ..	18,827
4. Abyssinian Mts...	A great mountain plateau which trends N. and S.	<i>Ras Dejam</i>	15,160
3. West Coast System	Which runs N.; and N.W., skirting the W. coast from the Orange River to the Gambia.		
1. Lange Berg	Which is a N.W. continuation of the great S. ranges.	<i>Welcome Point</i>	5,300
2. Mts. of Namaqua and Damara	Stretching from the Orange River to the 10th parallel S. lat.	<i>Omatako</i>	8,800
3. Sierra Complida..	Stretching N. from the Congo to the head of the Bight of Biafra.	<i>Mt. Albert</i>	13,760
4. Kong Mts.	Which run E. and W. parallel to the entire coast of Guinea.	(?)	8,000
4. North Coast System	Which skirts the N.W. coast, trending S.W., and N.E.		
1. The Atlas Mts. ..	Stretching N.E. from the Atlantic coast to Cape Bon, on the Mediterranean.	<i>Millsin</i>	11,400

Obs. 1. The **South Coast System**, belongs to the vast highland region of S. Africa, which lies between the Ocean and the Gariep, or Orange River, and consists of a series of terraces called "Karoos," rising from S. to N., and each bounded by a lofty range of mountains. The "Great Karoo," or Northernmost terrace, is bounded by the *Nieuwveld Range*. Quitting its parallelism to the S. coast, this range turns both at its E. and W. extremities towards the N., and connects itself with the E. and W. coast systems. Of the ranges which bound the lower terraces, between the Great Karoo and the sea, the *Zwarte Bergen* is chief. It runs parallel with the Nieuwveld Range from E. to W. The range which bounds the S. terrace is parallel with the coast and with the North ranges, and is abruptly terminated on the W. by the transverse ranges of the Hottentot, and Drachenstein Mts.

Obs. 2. The **E. Coast System** forms the buttress of the great highland region of S. Africa, and preserves a general parallelism to the coast. The Drakenberg portion of the system extends to the Limpopo River, and lies distant from the coast from 80 to 160 m. Between the Limpopo and the Equator the E. coast

system is represented principally by the Lupata or Matoppo Mts., and the Kilimanjaro Mts., which include *Kenia* (18,000 ft.), one of the loftiest summits yet discovered in Africa. The next great representative of the system is the lofty and mountainous *Plateau of Abyssinia*, which has a mean elevation of 7000 ft., and culminates in *Ras Dejam*. From the N. of Abyssinia the E. coast system is continued parallel to the Red Sea, through Nubia and Egypt, rising in *Mt. Jebel Oliba*, to an elevation of 7000 ft., and terminating in the Mokattam range which passes close by Cairo.

Obs. 3. The W. Coast System also originates in the S. highland region, and is chiefly represented by the ranges named in the table. What is here called the *Sierra Complida* range is known in its middle course as the *Sierra do Cristal*, and at its N. extremity as the *Cameroon Mts.* Offsets of this range stretch N.E. into the Soudan, embracing the peaks *Alantika* (10,000 ft.), and *Mindiff* (6,000 ft.). The *Kong Mts.* stretch from the 7th meridian E. to the 11th W., and though they do not rise to an elevation of more than 3,000 ft., they impart a rocky character through their S. spurs to a coast line of 1,000 m. long.

Obs. 4. The N. Coast System of which the *Atlas Mts.* form the most distinctive part, stretches towards the N.E., and E.; from Cape Ghir on the Atlantic, to the plain country near the mouths of the Nile, a distance of 1500 m., and from the coast on the N., to the edge of the Sahara on the S., a distance of 300 m. The system includes two great ranges, viz., the *Northern* or *Little Atlas*, and the *Southern* or *Great Atlas* which comprises the loftiest summits of the system, and terminates in Cape Bon on the N.E. shore of Tunis.

Obs. 5. Mts. of the Interior. In addition to the above named ranges, there are several others in the interior, the chief of which are

1. *Blue Mts.* W. of Lake Albert Nyanza. 2. *Kitwara Mts.* at the S.E. extremity of the same lake. 3. *Lokinga* or *Babisa Mts.* S. of Lake Bangweolo. 4. *Urungu Mts.*, between Bangweolo and Tanganyika Lakes. 5. *Kirk Mts.* W. of Lake Nyassa. 6. *Livingstone Mts.* E. of Lake Nyassa. 7. *Mossambu Mts.*, which run N. and S. to the E. of Angola, and from which rivers flow in all directions.

2. Plateaux and Deserts, which constitute a large proportion of the surface of Africa. The chief of these are

a. The *Great Central African Plateau*, a vast connected mass of elevated territory which stretches from the 10th parallel N. lat. to the 30th parallel S. lat. and from the E. mountain ranges to those on the W., and comprises the most extensive tablelands, such as those of the *Kalahari Desert* N., the *Great Karoo*, and the *Long Kloof*, S. of the Orange River. The mean elevation of its surface may be taken at from 3000 to 4000 feet above the sea, but there are important variations in this respect, from the depressions about some of the great lakes to the lofty mountains which shoot up high above the general level.

b. The *Plateau of Abyssinia*, consists of several elevated and extensive tablelands, which are traversed in all directions by mountain ranges, and intersected by numerous valleys. Its general elevation is upwards of 7000 feet above the sea, but it is buttressed both on the E. and W. sides by mountain ranges of still greater elevation.

c. The *Plateau of Barca*, which skirts the Mediterranean by the E. side of the Gulf of Sidra, rises to an elevation of 1500 ft. and extends 200 m. inland.

d. The *Plateau of Barbary*, the great N.W. highland from which rises the Atlas Mountains. It extends from the Mediterranean on the N. to the Sahara on the S., and from the Atlantic shores on the W., to the furthest shores of Tunis on the E. The E. portion of the plateau has a general elevation of from 2000 to 3000 ft., and forms a great steppe enclosed by outer heights. The W. part is loftier and is traversed by the same heights which, now drawn closer together, form the Atlas Mts.

e. The *Sahara and Libyan deserts*, which stretch from the Great Central African Plateau on the S., to the Atlas Mts. on the N., and from the Nile on the E., to the Atlantic on the W. The Sahara is not a monotonous waste of sand, but an expanse made up of tablelands, with lofty mountain groups, plains, and depressions.

DRAINAGE.—The *drainage* of Africa is partly Oceanic and partly Continental. The Oceanic portion is carried to the sea down three great slopes which respectively incline N. towards the Mediterranean; W. towards the Atlantic; and E. towards the Indian Ocean. The Continental part embraces two great areas, viz., one in the N. corresponding generally with the Sahara, and one in the S. almost identical with the Kalahari Desert. The chief drainage agents are the

1. **Rivers which belong to the**

a. *Oceanic System* and comprise those flowing down the

(a.) *Northern Slope*, into the Mediterranean, viz., the Nile, and Shellif.

(b.) *Western Slope*, into the Atlantic, viz. the Senegal, Gambia, Joliba or Quorra or Niger, Ogowai, Zaire, Congo or Livingstone, Coanza, Orange or Gariep, and Oliphants.

(c.) *Eastern Slope*, into the Indian Ocean, viz., The Great Fish River, Kei, Tugela, Limpopo or Crocodile, Zambesi, Rovuma, Rufigi or Lufigi, Dana, and Juba.

b. *Continental System*, including those of the

(a.) *Northern Area*, the Shari, the Shari, and Komadugu, which flow into Lake Chad.

(b.) *Southern Area*, viz., the Tioze, which flows into Lake Ngami.

Obs. 1. The Nile, the most ancient, the most historical, and one of the largest rivers of the globe, is thought to have for its ultimate sources the feeders of the Lakes Victoria Nyanza, and Albert Nyanza. It first assumes the dimensions of a river when it quits the Victoria to join the Albert Nyanza. Issuing with a greatly augmented volume from the N. extremity of the Albert Nyanza, it pursues an almost direct N. course until it falls into the Mediterranean by two principal arms, having traversed a distance of more than 4,000 m., and drained an area of more than a million square miles. The Nile leaves Lake Victoria at an elevation of 3,300 ft., and forms in its progress seawards, numerous falls, rapids and cataracts. Of its many *tributaries* the chief are the Bahr-el-Arab or Homr, on the left, and the Bahr-el-Azrek or Blue River, and Atbara or Black River, both from Abyssinia, on the right bank. The great low plain which lies between the two mouths of the Nile is called the "Delta," and is some 9,000 sq. m. in extent. It is the annual overflow of the Nile which so richly fertilizes the plains of lower Egypt.

Obs. 2. The Senegal rises among the N.W. slopes of the Kong Mts., flows N.W. over a course of upwards of 1,100 m. and enters the N. Atlantic opposite the Cape Verde Islands. It is navigable at all times for about 150 m. above its mouth, but in the rainy season, for about 500 m.

Obs. 3. The Gambia has its sources near those of the Senegal, flows W. over a course of above 500 m., four-fifths of which is navigable.

Obs. 4. The Quorra or Niger, called in its upper course the Joliba, the third in size of the African rivers, rises near Mt. Loma in the Kong Mountains, flows N.W. to the meridian of Greenwich, and thence S.E. until it falls into the Gulf of Guinea by numerous mouths between the Bights of Benin and Biafra. Its total length is said to be about 3000 m. and the entire area drained by it, above 1,000,000 sq. m. Its chief *tributaries* are the Sokoto, and the Benue, both large rivers from the interior.

Obs. 5. The Congo or Livingstone,¹ one of the mightiest rivers upon earth, rises in the Urungu Mts., S. of Lake Tanganyika, and under the name of the Chambeze flows W. into Lake Bangweolo: leaving this lake as the Webb River, it flows N. to Lake Moero. Between Moero and Lake Kamolondo it is known as the Luabala. From Kamolondo the river flows N.W., W., and S.W., and after a total course of 2650 m. falls into the Atlantic by a broad and deep estuary. The navigation of the river is interrupted by many rapids and falls. Of its many large *tributaries* very little is, as yet, known.

Obs. 6. The Orange River or Gariep is formed by the union of the Vaal and Nu Gariep, which rise on the opposite slopes of the "Mont aux Sources," a lofty summit of the Drakenberg. From the junction of these rivers the main stream

¹ Explored by Mr. Stanley in 1876-7.

flows W. by N. over a course of 1000 m. and falls into the S. Atlantic. Its chief tributaries are the Hartebest from the S. and the Great Fish River from the N.

Obs. 7. The *Limpopo* or *Orocodile River* rises in the district between Witte Water Band, and Yats Band, towards the S. of the Transvaal Republic. Its general course is N.E., E., and S.E., and it reaches the Ocean at a point some few miles N. of Delagoa Bay. Its chief tributary, the Olifant, is also a river of this Republic.

Obs. 8. The *Zambesi*, the largest river of the E. coast, and the fourth in point of size of the African rivers, is formed by the union of the Liba, and Chobe; and has its remotest sources among the Mossamba Mts. After its full formation, the Zambesi flows E. in two large curves and falls into the Mozambique Channel by many mouths, having drained an area of 600,000 sq. m. Its chief tributaries are the Guay, on the right bank, and the Loangwa, and Shire, on the left bank. A few miles E. of the confluence of the Chobe lie the Victoria Falls, where the river, nearly a mile broad, descends into a rift 350 ft. deep and 80 ft. wide, forming a larger cataract than that of Niagara. The Zambesi is navigable from the sandbanks which bar the mouths to the town of Tété, 320 m.

Obs. 9. The *Bevuma*, the next largest tributary of the Indian Ocean, appears to rise in the highland region N. of lake Nyassa, and flowing E. falls into the sea by Cape Delgado. Dr. Livingstone navigated it for 150 m. above the coast.

2. Lakes which form a very prominent feature in the African drainage system, and which, though distributed over all the great basins, occur chiefly in those of the S. and E. regions. They may be classified according to their character as *Oceanic*, and *Continental*, lakes. Of the

a. *Oceanic*, the chief are those belonging to the basin of

(a.) The *Nile*, viz., Victoria Nyanza, Albert Nyanza, Baringo, and Dembea.

(b.) The *Congo*, viz., Tanganyika, Bangweolo, Moero, and Kamolondo.

(c.) The *Zambesi*, viz., Nyassa.

b. *Continental*, viz., Chad, and Ngami.

Obs. 1. *Lake Tanganyika* lies in a deep longitudinal valley 540 m. from the E. coast on the 30th meridian E. long. It is 10,000 sq. m. in extent, and its waters are brackish. It is drained by the Lukuga, which flows W.

Obs. 2. The *Victoria Nyanza*¹ lies on and S. of the equator and between the meridians 32° and 34° E. long. Its length is about 250 m., breadth, 85 m. Elevation, above the level of the sea, 3808 ft., and area, about 30,000 sq. m. It is drained into the Albert Nyanza by the Nile. Its waters are fresh and sweet.

Obs. 3. The *Albert Nyanza*² is one of the largest bodies of fresh water in the world. It lies N.W. of the Victoria Nyanza and is connected with it by the Nile. It is about 140 m. long, lies at an elevation of 2720 ft. above the sea, and is upwards of 7000 m. in extent. It is one of the chief feeders of the Nile.

Obs. 4. *Lake Bangweolo* or *Bamba* is the southernmost of the Congo lakes. It is 150 m. long, from E. to W., 75 m. broad, and lies at an elevation of 3688 ft. above the sea. It receives the Chambeze River on its E. shore and discharges its waters into Moero by the Webb River.

Obs. 5. *Lake Moero* lies to the N. of Bangweolo at an elevation of 3232 ft. above the sea. It is 75 m. long, and is drained by the Luabala which flows N. into Lake Kamolondo.

Obs. 6. *Lake Nyassa* lies E. by S. of Bangweolo. Its area is 9000 sq. m.; and its elevation above the sea about 1500 ft. It discharges its waters into the Zambesi by the Shire River.

Obs. 7. *Lake Chad* is the largest lake of the N. Continental drainage area. It is situated on the border of the Sahara, and near the 14th meridian E. long. It is shallow and studded with islands and varies much in size according to the season. It receives the Komaduga, and the Shari rivers. Its waters are fresh, and it lies at an elevation of about 1100 ft.

CLIMATE.—Africa lies almost wholly within the tropics, and is therefore subject to an extremely high temperature. The hottest parts, however, are not about the Equator itself, but in the Sahara, near the N. tropic—where the summer temperature rises, in spots,³

¹ Discovered by Captain Speke in 1858.

² Discovered by Sir Samuel Baker in 1864.

³ In the *Nubian Desert* food may be cooked by

being buried in the sand: at Murrak in Fozzan, the hottest known spot upon earth, the thermometer registers 130° in the shade.

to upwards of 100° Fahr. in the shade—and in the Kalahari Desert, near the S. tropic. The central parts of Africa, and especially the coasts, are very unhealthy; but Algeria in the N. and large tracts in the S. are becoming widely celebrated for the excellence of their climate.

Obs. The rainfall within the tropics is *periodical*, and falls during certain months in great quantities over certain localities. At Sierra Leone on the W. coast as much as 313 in. have fallen during the year. The Sahara, however, and the Kalahari Desert are all but rainless regions; so that the *mean rainfall* for the continent is not large. Parts of the country are exposed to hot and pestilential winds, such as the *Harmattan*, which sweeps the Guinea Coast; the *Khamsin*, dreaded in Egypt, and the *Samiel* or *Simoom*, the scourge of the Sahara. The S.E. littoral is at times visited by hurricanes.

PRODUCTIONS.—The characteristic *productions* are given in the following table:—

ANIMAL.	VEGETABLE.	MINERAL.
Quadrupeds — <i>Wild.</i> —The lion, ¹ tiger, leopard, hyena; elephant, ² hippopotamus, ³ and two-horned rhinoceros; giraffe, zebra, gnu, elands, ⁴ antelope, and monkeys; ⁵ buffalo, wild horse, quagga, ⁶ wild ass. <i>Domestic.</i> —The dromedary, ⁷ ass, dog. Birds — <i>Wild.</i> —The ostrich, ⁸ secretary bird, vultures, eagles, kites, cranes, flamingoes, pelicans, parrots, paroquets, and small birds of gaudy plumage in swarms. <i>Domestic.</i> —Secretary bird (in the S.), and guinea hen. ⁹ Fish abound both in the lakes and rivers; and off the coasts all round the continent they are plentiful and of great variety. Reptiles. —Crocodiles, chameleons, lizards, and poisonous serpents. Insects. —Scorpions, spiders, white ants, bees, silkworms, locusts, ¹⁰ and tsetse. ¹¹	Grain. —Wheat, barley, maize, rice, and sorghum (in N. and S. Africa). Fruits. —Oranges, olives, baobab, figs, grapes, pomegranates, melons, coffee, papaw, custard apple, tamarind, and pine apples. Palms, especially the date palms, ¹² oil palms, and sago palms. Arborescent Grasses. —Sugar-cane, and papyrus plants. Timber. —Evergreen oak, cork, oak, sandrach (supposed to be the Shittim wood of Scripture), pines, and cotton trees. Sundries. —Cotton, tobacco, indigo, gum-cistus, gum arabic, seuna, tamarisk, camphor, myrrh, frankincense, &c.	Precious Stones — Diamonds in S. Africa, between the Orange River Free State and the Trans-Vaal Republic. Precious Metals. — Gold, between the Limpopo and Zambesi, and in many of the river sands; silver in Abyssinia and Morocco. Useful Metals. — Iron and copper, widely diffused, lead in Algiers and Tunis. Other Minerals. — Coal in small quantities, salt, and natron, from the lakes of the desert region.

¹ The African Lion is the noblest animal of his race; in size, strength, and beauty, he surpasses all the Asiatic lions.

² The Elephant is found in all the African forests.

³ The Hippopotamus is peculiar to Africa: the average weight of this beast varies from three to four thousand pounds.

⁴ Of Elands Africa embraces more species than all the rest of the world.

⁵ Of which family the Anthropoid monkeys—the gorilla and chimpanzee—are the most important.

⁶ The Quagga is exclusively African. It belongs to the S. of the continent and is scarcely ever seen N. of the Orange River.

⁷ The Dromedary or single humped camel, is used over the whole of N. Africa.

⁸ The Ostrich is found in most parts of Africa; but the desert and the open plains furnish its favourite haunts. It has been called "the Giraffe among birds" and the "feathered camel."

⁹ The Guinea Hen is the only genus of African gallinaceous fowls adapted to the poultry yard: it is not found indigenous in any other part of the world.

¹⁰ The Locust from time immemorial has been proverbially the scourge of the whole continent.

¹¹ The Tsetse or Zebub, is the plague of the low and cultivated districts. While it is fatal to cattle, it is not dangerous to men and wild animals.

¹² Of the nearly 1000 different species of palms, the date palm is the most important. It supplies as it were the bread of the desert, furnishing the food of men, camels, and horses.

PEOPLE, LANGUAGES, AND RELIGIONS.—The *population* of Africa is estimated at 205,219,500. The bulk of the people consists of *Negroes*, who speak their own *languages*, and are idolaters. Their skin is black, their hair woolly, their lips thick, and their noses flat.

Obs. Various races of *Caucasian* descent occupy different parts of N. Africa, as the *Abyssinians*, the *Copts* of Egypt, the *Tuareks* of the N. Sahara, the *Kabyles* of Algeria, and the *Berbers* of Morocco. Their *Languages* are Shemitic, their *Religion* mostly Mohammedan, their skin is light brown, their hair long and black, and their features much like our own. Further South are the *Kaffirs*, who have no religion of their own, but amongst whom *Christianity* is being planted by missionaries. Their colour is dark brown, their hair curly and short, their lips large and thick, and their bodies well developed and muscular. The *Hottentots* dwell in the desert of Kalahari, and extend into the S.W. corner of Africa. They form a distinct variety in the population of Africa, and closely resemble the Asiatic Mongolians. Their colour is a yellowish brown, their hair in tufts, their noses broad and flat, their persons stunted and often deformed.

THE POLITICAL DIVISIONS OF AFRICA.

It is impossible to give a complete list of, or to assign definite limits to, the States and Countries of Africa, because the continent has, as yet, been but partially explored, and because political organization is in a very rudimentary condition among the native African communities. The territories of certain states, such as Morocco, Egypt, and Abyssinia, have more definite limits, and the African possessions of England and France are marked out and administered with a considerable degree of precision; but generally speaking the divisions are territorial rather than political, conventional rather than official. The most important are those of—

- I. **North Africa**, viz., MAROCCO, ALGERIA, TUNIS, and TRIPOLI with BARCA and FEZZAN.
- II. **North East Africa**, viz., the EGYPTIAN TERRITORIES, and ABYSSINIA.
- III. **Eastern Africa**, viz., SOMALI, GALLA COUNTRY, ZANGUEBAR, and MOZAMBIQUE.
- IV. **South Africa**, viz., MATABEL LAND, UMZILAD LAND, THE TRANSVAAL, SIX INDEPENDENT BECHUANA KINGDOMS, ORANGE RIVER FREE STATE, ZULU LAND, NATAL, KAFFRARIA, CAPE COLONY, KALAHARI DESERT, NAMAQUA LAND, DAMARA LAND, and OVAMPO LAND.
- V. **Western Africa**, viz., the KINGDOMS OF ANGOLA, CONGO, and LOANGO.
- VI. **North Western Africa**. UPPER GUINEA, SENEGAMBIA, and EUROPEAN SETTLEMENTS.
- VII. **North Central Africa**, or SAHARAN COUNTRIES, viz., BAMBARRA, MASSINA, GANDO, SOKOTO, BORNU, BAGHERMI, and WADAI.
- VIII. **South Central Africa**, viz., UGANDA, UNYAMWESI, URUA, ULUNDA, LUNDA, MARUTSE-MABUNDA, &c., &c.

I. NORTH AFRICAN OR BARBARY¹ STATES.

PHYSICAL GEOGRAPHY.

INTRODUCTION.—The territory occupied by the Barbary States consists of a broad belt on the N. coast, stretching from the Mediterranean on the N. to the Sahara on the S., and from the borders of Egypt on the E. to the Atlantic Ocean on the W., and covering an area which is estimated at 908,000 sq. m. The States are—

1. **MAROCOCCO**, which occupies an area of 259,600 sq. m. at the N.W. corner of the continent. It has the Mediterranean on the N., Algeria on the E., the Sahara on the S. and the Atlantic on the W. Its surface is mountainous, being traversed from N.E. to S.W. by the ranges and spurs of the Atlas System, which has its culminating point (*Mt. Miltzin*) in this state; it comprises also some broad plains and expansive valleys, among which may be mentioned the Oasis of Tuat, and the Wady Draa. The chief rivers are the Moluviah, flowing into the Mediterranean, and the Sebu, Morbeya, Tensift, and Draa which fall into the Atlantic. The climate is healthy, and the soil fertile. The productions include wheat, maize, millet, and barley; but the date palm furnishes the chief sustenance of the people; iron, copper, and antimony. The population is estimated at 6,000,000, and consists of Berbers, Moors, Arabs, and Jews. The language spoken generally is Arabic.

2. **ALGERIA**,² (Fr. *L'Algérie*), which is the largest and most important of the French colonial possessions. Its estimated area is 122,877 sq. m., its length from E. to W. is about 550 m. its breadth about 380 m. and it lies between the parallels 32° and 37° N. lat., and between the meridians 2° 10' W. and 8° 50' E. long., having the Mediterranean on the N., Tunis, and Tripoli on the E., the Sahara on the S., and Marocco on the W. The coast is steep and rocky, and lacks good harbours; the surface is mountainous, being traversed from E. to W. by the Great and Little Atlas ranges which send off many transverse ridges. The rivers are numerous but not large. The most important of them are the Shellif, which rises among the N. slopes of the Great Atlas, flows N. and W. and after a course of 370 m., falls into the Mediterranean; the Sahel which flows N. E. into the Gulf of Bougie; the Kebir which flows N. by Constantine. Extensive lakes are a distinguishing feature of the Algerian drainage system. The productions include maize, rice, millet; dates, figs, olives, aloe, oleander, and cork; bees' wax; iron, lead, and copper. The population in 1877 was 2,867,626 and consists of Kabyles, Arabs, Moors, Jews, Turks, and Europeans. The common language is Arabic.

3. **TUNIS**, which is the smallest of the Barbary States, has an area of 45,700 sq. m. It lies at the N.E. corner of the Atlas region, having the Mediterranean on the N. and E., Tripoli on the S., and Algeria on the W. Its surface forms three distinct regions known respectively as the "Tell," or fertile coast slopes, the "Steppes," which are highlands, and the low plains of Sahara, on the S. Tunis possesses no river of importance: but it has the large Lake Kairwan and the great Salt Marsh of Mellah on the border of the desert. The climate is, generally speaking, healthy. The productions are like those of Marocco and Algeria, but the best dates are more extensively grown; salt and saltpetre are among the minerals of Tunis. The population amounts to 2,100,000 and consists chiefly of Moors, Arabs, and Jews, who speak, generally, Arabic.

¹ Barbary, so called from the *Berbers* or *Kabyles*, who form the basis of the population of the region.

² Algeria was invaded and Algiers taken by the French in 1830, and has since that time been under French rule.

4. **TRIPOLI WITH BARCA AND FEZZAN**; a regency of the Ottoman Empire, stretches E. along the coast from Tunis to Egypt, and S. from the sea to the Sahara. The coast is deeply penetrated by the Gulf of Sidra, and includes a few fairly good harbours. The *area* of the three territories is 344,400 sq. m. The *surface* is of the most varied character, and consists of a series of belts of plain, mountain, hill, plateau, and sandy desert which extend parallel with the coast through the greater part of the country. The *chief mountains* are the Gharian, in the N.W., and the Black Mountains which contain the culminating point (2,800 ft.) in the centre. The *plateau* of Barca occupies the parts N.E. of the Gulf of Sidra, and that of Hamadah, the desert between Tripoli and Fezzan. The only *rivers* are but periodical torrents, and water springs are very rare. The *climate* is unhealthy in many parts, and generally it is characterised by extremes of heat and cold. The *soil* is to a large extent barren, but there are some fertile tracts along the maritime plains and in the mountainous and hilly districts. The *chief productions* are dates, olives, figs, and grain,—especially durra; salt, and sulphur. The *population* is said to number about 750,000, and consists of Arabs, Negroes, Turks, Berbers, Jews, and Tibbus. The *language* generally spoken is Arabic.

POLITICAL GEOGRAPHY OF THE BARBARY STATES.

The principal States, Divisions, and chief towns of N. Africa are given in the following table :—

STATES.	ADMINISTRATIVE DIVISIONS.	CHIEF TOWNS.	STATES.	ADMINISTRATIVE DIVISIONS.	CHIEF TOWNS.
Marocco	{ Fez (Kingdom of).	{ Fez, Tan-	Algeria.	{ ORAN	Oran, Mascara.
	MAROCCHO (King-	gier.		ALGIERS	Algiers, Blidah.
	dom of)	{ Marocco,		CONSTANTINE .	Constantine.
	SUS	Mogador.	Tunis		Tunis, Kairwan.
	TAFILET	Talent.	Tripoli .	{ TRIPOLI	Tripoli.
	TUAT	Tafilet.		BARCA	Benghazy.
		Insalah.		FEZZAN	Fezzan, Mourzuk.

NOTES ON THE CHIEF TOWNS OF THESE STATES—The five most populous towns are *Fez* (150,000), *Tunis* (125,000), *Algiers* (58,000), *Marocco* (50,000), and *Kairwan* (50,000).

Obs. 1. Fez, the capital of Marocco, lies near the Sebu river. In the middle ages it was a famous seat of scientific learning; now, it is celebrated for its numerous educational establishments, for its 800 mosques which cause it to be regarded as a "holy city," and for its *manufactures* of silk and woollen fabrics, and marocco leather.

Obs. 2. Algiers (Fr. *Alger*), the capital and naval port of the colony, lies on the W. shores of a bay on the N. coast, is strongly fortified, and consists of a native and a French quarter. The latter is built in European style and occupied by French people.

Obs. 3. Tunis, the capital of the state, lies on the W. side of a lake which communicates with the Gulf of Tunis by the channel of Goletta, and only 13 m. N.W. of the site of ancient Carthage. It is the most important commercial city in the Barbary States. Its chief manufactures are silk and woollen fabrics, and the well-known fez caps.

The chief **ports** are *Mogador*, and *Tangier* on the Atlantic Coast; *Algiers*, *Philippeville*, and *Tripoli*; on the shores of the Mediterranean.

The chief **industrial centres** are *Fez* (silk and woollen fabrics, and Marocco leather); *Marocco* (silk stuffs, embroidery, and leather work); *Tunis* (silk and woollen fabrics, and Fez caps); and *Mourzuk* (commerce).

INDUSTRIES.—The principal industry of all the Barbary States is *agriculture*, but it is carried on in a very primitive and imperfect fashion. The *manufactures*, which are common throughout these states, are silks, cottons, carpets, and leathern goods; *commerce* is largely followed both by sea and land, and includes the *export* of dates, olive oil, wax, tobacco, sponges, cattle, hides, silks, fez caps, and leather; and the *import* of gold dust, ostrich feathers, ivory, slaves from the interior, and European manufactured goods.

COMMUNICATIONS.—These are mostly carried on by sea, and by numerous caravans. A short line of railway from Tunis to Mzez-el-Bab was opened in 1879, and other lines are being laid in Tunis. The chief beasts of burden are the dromedary, horse, and mule.

GOVERNMENTS, RELIGION, AND EDUCATION.—In *Marocco* the government is a despotic monarchy: the provinces are under military governors. In *Algeria* the chief authority is exercised by a Military Governor General. The civil system of administration is in use among the European populations. In *Tunis* the Bey holds his authority by hereditary right and, though nominally subject to Turkey, is virtually independent. *Tripoli* is tributary to the Porte, and the government is in the hands of an hereditary Pasha. The chief *religion* is Mohammedanism: but there are numbers of Jews, and of Greek Catholics. *Education*, generally speaking, is confined to the towns; and even here very little is taught beyond reading the Koran and writing. The French have established schools in all the towns of Algeria.

II. NORTH EAST AFRICAN STATES.

I. EGYPTIAN TERRITORIES.

PHYSICAL GEOGRAPHY.

Latitude. From 31° 50' N. to the Equator. *Longitude.* Between 22° and 45° E.
Area, 1,050,828 sq. m.

Obs. The authority of the Khedive of Egypt extends to the Equator, and the Egyptian Territories include Egypt proper, Nubia, and Egyptian Soudan, (Kardofan, and Darfur).

POSITION AND BOUNDARIES.—Egypt occupies the N.E. portion of Africa. It is bounded on the

N. by the Mediterranean; E. by Asiatic Turkey, and the Red Sea; S. by Abyssinia, and the highlands of Central Africa; W. by Nyamnyam, Wadai, the Sahara, and Tripoli.

SURFACE.—A large proportion of the territory consists of dreary and barren deserts, the monotony of which is relieved only by naked ranges of mountains and hills. The fertile districts are confined

almost entirely to the narrow valley and the Delta of the Nile, to upper Nubia and parts of Soudan. The most prominent surface features are the

1. **Deserts**, the best known of which are the

a. Arabian Desert which occupies nearly the whole of Egypt E. of the Nile. Its distinguishing features are naked hills, elevated plains, and close valleys; the only vegetation being isolated patches of dry, stunted, and woody shrubs.

b. Nubian Desert, a great burning sterile wilderness of sand and rocks in N.E. Nubia, between the Nile and the Red Sea. Here and there the desolate appearance of this inhospitable region is relieved by small oases.

2. **Mountains**, the chief of which are

a. The Libyan Chain which skirts the land of Egypt on the W. and divides it from the Sahara.

b. The Arabian Chain which runs near and parallel to the Red Sea from N. to S. Its culminating point is *Jebel Olba* (7,000 ft.) near the 22° parallel N. lat.

Obs. Low mountain ranges also skirt the narrow valley of the Nile on both sides, and defend it against the drifting sands of the surrounding deserts.

DRAINAGE.—The drainage of the Egyptian territories is carried down one long slope, which inclines N. towards the Mediterranean Sea. The chief river of the region is

The **Nile** which is one of the largest rivers of the earth, and one of the most venerable for its historical association. See p. 175, Obs. 1.

CLIMATE.—Throughout Egypt and N. Nubia, the climate is tropical, and dry, and the heat is excessive. Very little rain refreshes this region, but there are copious falls of dew. The hot, stifling, and pestilential *khamzin*, scourges the country during the months of April and May. But the climate is, generally speaking, more healthy than that of many other tropical countries. S. Nubia and Soudan are within the region of tropical rains, and have a hot, moist, and most insalubrious climate.

PRODUCTIONS.—The characteristic productions of this region are the crocodile of Upper Egypt, the Nubian lion, and the ostriches of the deserts; the hippopotamus, rhinoceros, and giraffe; rice, lentils, and wheat; melons, cucumbers, and the great monkey-bread tree; fruits—especially dates, figs, lemons, and pomegranates; sugar, cotton, indigo, senna, and papyrus.

PEOPLE AND LANGUAGES.—The population of the Egyptian territories is estimated at 17,386,000, and consists of Egyptians—who are of Arabic descent—Copts, Bedouin Arabs, Negroes, Europeans, Jews, and Nubians. Numerous tongues are spoken by these various peoples, but Arabic is the common language.

POLITICAL GEOGRAPHY.

INTRODUCTION.—Egypt as a sovereignty includes Egypt Proper, Nubia, and Soudan.

Obs. 1. **Egypt Proper** stretches S. from the Mediterranean to the 24th parallel N. lat., and from the Red Sea on the E. to the Libyan desert on the W.

Obs. 2. **Nubia** lies S. of Egypt, and stretches S. from the 24th to the 9th parallel N. lat. Its E. and W. boundaries, like those of Egypt, are the Red Sea and the Libyan desert respectively.

Obs. 3. **Soudan** lies on the S.W. side of Nubia, and extends from the border of the White Nile Valley W. to the desert.

POLITICAL DIVISIONS.—The following table contains the countries with the chief divisions and towns of the Egyptian territories.

COUNTRIES.	CHIEF DIVISIONS.	CAPITALS.	OTHER TOWNS.
Egypt ... {	1. LOWER EGYPT ..	Cairo	Alexandria, Damietta, Rosetta, Suez, Port Said.
	2. CENTRAL EGYPT.	<i>Siut</i>	Minieh, Antin.
	3. UPPER EGYPT ..	<i>Assuan</i>	Esneh.
Nubia		<i>Khartum</i>	Suakin, Massowah, New Dongola.
Soudan {	KORDOFAN	<i>El Obeid</i>	Bara.
	DARFUR	<i>Fasher</i>	Kobbe.

NOTES ON THE TOWNS, the five most populous towns are *Cairo* (327,462), *Alexandria* (165,752), *Damietta* (32,730), *Rosetta* (16,243), and *Suez* (11,327).

Obs. *Cairo*, the capital, is on the Nile, at the apex of the Delta. It is the largest city in Africa, the chief entrepôt for the commerce of Egypt, and is joined to Alexandria and Suez by railway.

Alexandria, the chief naval and commercial port of Egypt, lies at the N.W. corner of the Delta and is one of the most famous cities of the world. Standing at the head of the Suez railway, it is an important station on the overland route to India.

The other chief ports are *Rosetta*, *Damietta*, *Said*, on the Mediterranean; *Suez* at the head of the Gulf of Suez; *Suakin*, and *Massowah*, on the Red Sea.

INDUSTRIES.—The principal branch of industry is *agriculture*. *Manufactures* include carpets, woollen and linen cloths, pottery, and firearms. *Commerce* is very active, and comprises a large transit traffic between England and India, *viâ* the Alexandria and Suez Railway and the Suez Canal, and a large trade with the interior, *viâ* the Nile and by caravans. The *exports* of these territories include gold, ivory, ostrich feathers, flax, cotton, indigo, grain, and gum arabic.

COMMUNICATIONS.—Egypt possesses three grand routes of communication, which make her the great commercial highway between England and India, *viz.*, the Nile, the *Alexandria and Suez Railway*, and the *Suez Canal*. She has also freshwater canals, branch lines of railway, and a very complete telegraphic service. In the S. possessions, commerce is carried on through the Nile, and by the caravan tracks.

GOVERNMENT, RELIGION, AND EDUCATION.—The *government* is a pure despotism, the absolute power of the hereditary rulers being restricted by no laws. The Khedive (or king) of Egypt, is a tributary prince of Turkey: but he unites in his own person all legislative, executive, and judicial authority, and disposes of the lives and property of his subjects. The *State religion* is Mohammedanism; but the Europeans and Copts, descendants of the ancient Egyptians, and the Armenians, are Christians. There are primary schools in most of the villages and towns, and a university for higher education at Cairo. There are also naval and military schools, and colleges for the study of agriculture, medicine, &c. In the elementary schools the standard of instruction is low, scarcely extending beyond reading, writing, and learning the Koran by rote.

II. ABYSSINIA.¹

GENERALITIES OF PHYSICAL GEOGRAPHY.

Latitude. Between 7° 30' and 15° 40' N. *Longitude.* Between 35° and 40° 30' E.
Area. 158,400 sq. m.

Abyssinia has Egyptian territory on its N.W.; N.; and N.E. frontiers; and districts occupied by wild and mostly unknown tribes on its E. and S. borders. The *Surface* of the country consists mainly of lofty tablelands of from 6,000 to 9,000 ft. above the sea. These plateaux are dominated by the mountain masses of *Samen*, between the river Takazza and Lake Tsana, and Godigam, within the great curve of the Abai river. *Ras Dejam* (15,160 ft.) is the culminating point of the Samen group and of Abyssinia. The *drainage* of the country flows N.W. and belongs to the basin of the Nile. The chief *rivers* are the Mareb, and Takazza, tributaries of the Atbara, which drains the N. part of the country, flows N.W., through Nubia, and joins the Nile on its E. bank, and the Abai or Blue Nile which drains the S. parts, flows N.W. and joins the White Nile at Khartum. The principal *lake* is Tsana or Dembea, which lies near the centre of the country. It is 60 m. *long* and 40 m. *broad*, includes many small islands, receives many small streams, and emits the Abai. The *climate* takes rank amongst the most healthy climates known. The *productions* are numerous and varied, and include teff, and tocussa (breadstuffs), coffee, sugar-cane, bananas, dates, grapes, oranges, and lemons; myrrh, balsam, and other medicinal plants: honey forms an important part of the food of the inhabitants. The *people* are said to number 3,500,000, and to consist of Caucasian races, of dark olive colour, Gallas, whose complexion is brown, and Falashas, a race of Jews, who occupy the district of Samen. The *language* of the Abyssinian literature and religion is the *Geez*, a family of the Ethiopic class of languages.

The chief *Territorial divisions* are Tigre, Ambara, and Shoa, which have respectively for their *chief towns* Adowa (4,000), Gondar (7,000), and Ankobar.

Obs. The towns of Abyssinia, generally speaking, are little better than straggling villages of huts. Some of the huts are flat roofed, but they are mostly thatched with straw. The walls of the houses consist of rough stones laid in mud after the rudest fashion. The largest town does not contain 7000 inhabitants.

The *Industries* of Abyssinia are chiefly *agriculture* and *cattle-rearing*.

¹ Abyssinia, more properly *Habessinia* (Heb. | by the Arabs on account of the mixed character *Habesch* = "mixture or confusion"), was so called | of the people.

Commerce includes the *export* of gum, coffee, ivory, myrrh, wax, honey, ostrich feathers, &c., and the *import* of silk, cotton, and woollen stuffs, glass and fire-arms.

The country lacks good roads, but caravans between Amhara and the coast *via* Adowa, are annually organised. The *Government* is monarchical, Abyssinia being one of the oldest monarchies in the world. Each chief is, however, supreme within his own territory. The prevailing *Religion* is a corrupt form of Christianity. There are also many Jews and Mohammedans scattered throughout the country.

III. EAST AFRICAN STATES.

The physical features of E. Africa have been already generally described, see pp. 173-6. No accurate description of the political systems and institutions of the countries of E. Africa is possible, because we have as yet, very little definite knowledge of those countries. The following account presents little more than a mere list of the chief territories which lie between Abyssinia on the N., and Zulu Land on the S.

i. **SOMALI**, along the S. shores of the Gulf of Aden, with *Harrar*, and *Berbera* for its chief towns.

ii. **THE GALLA COUNTRY**, which embraces the Eastern promontory from the S. of Abyssinia to the equator. It is thought to extend inland to the water-parting of the Nile.

iii. **ZANGUEBAR**, which extends from the Juba to the Rovuma, a distance of about 700 m. and from the coast inland to an indefinite distance. It is nominally subject to the Sultan of Zanzibar. The chief town is *Zanzibar*, on the island of that name, which is the residence of the Sultan, the centre of a large trade in ivory, gum-copal, cloves, etc., and the seat of a British consulate. It is a town of 60,000 inhabitants, who are chiefly Arabs. (See *Zanzibar*, obs. 3, p. 172).

iv. **MOZAMBIQUE**, which lies on the coast, and extends from the Rovuma to Delagoa Bay. This extensive territory—nearly as large as France and Spain together—is claimed by Portugal, although a few isolated spots only are actually occupied by Portuguese. The region is said to embrace 9 *districts*, viz., Cape Delgado, Mozambique, Angoche, Quilimane, Sena, Tete, Sofala, Inhambane, and Delagoa Bay. Much of the coast land is cultivated and yields rice: valuable timber and ivory are also characteristic productions. The chief towns of the region are Mozambique, the capital; Sofala, a port with a fine natural harbour, and Inhambane, an important trading station.

IV. SOUTH AFRICAN STATES, COUNTRIES, AND TERRITORIES.

This section is here made to embrace the chief of those states, countries, and territories, except the Portuguese possessions on the E. coast, which lie S. of the Zambesi on the E. side, and of the 15th parallel on the W. side. They are

i. **MATABELE LAND**, which is bounded on the N. by the Zambesi; E. by Umzila Land; S. by the Limpopo; and W. by the Bamangwato, and forms an irregular square of some 100,000 sq. m. in *area*. It is well watered, has a fine

climate, and good soil, and includes amongst its *productions* the bread-fruit, palms, olives, oranges, rice; cotton, fine timber, gold, and iron. The *population* is estimated at 200,000 souls. The *government* is almost personal. The chief town is Gubufuwayo, near the centre of the country.

ii. **UMZILA LAND**, which has Matabele on the W., the Portuguese Settlements on the E., the Makombe Country on the N. and the Limpopo river on the S. It is about 70,000 sq. m. in *area*, and, in parts, is thickly occupied by an industrious population.

iii. The **TRANSVAAL**, which lies between the Limpopo on the N. and the Vaal on the S.; and between Umzila and Zulu Land on the E. and Secheli's Country on the W. It is a British Colony, which was founded in 1848 by Dutch Boers or farmers who had migrated from Cape Colony in 1836. The State was annexed by Great Britain in 1877. The *surface* is an elevated plateau with thinly wooded hills. The country is well watered by tributaries of the Limpopo and the Vaal; the *climate* is healthy, and the *soil* very fertile. The *productions* include large and small game; excellent grain, and fruit; ivory, ostrich feathers, precious metals, and coal. The *population* is 315,000 of whom 40,000 only are whites. The country is divided into *ten districts*, which are governed by magistrates called "Landrosts." The chief towns are Pretoria, the *capital* (pop. 800) near the centre of the country, which is engaged in the ivory, and ostrich feathers trades: and Potchefstroom (pop. 1500), which lies in the S.W. The chief *industries* of the State are *agriculture* and *grazing*; but they are partially paralysed for want of markets. The *government* is *republican* in form, the power being exercised by the executive and legislative bodies. Each of the 10 Districts sends 3 members to an annual parliament. The *language* of the *Whites* is Dutch; the *natives* speak their own dialects. The *state religion* is the reformed religion of Holland; but all other forms of protestantism are tolerated.

iv. The **SIX INDEPENDENT KINGDOMS OF THE BECHUANAS**, which stretch from the Zambesi on the N. to the Orange River on the S., and from Matabele Land and the Transvaal on the E., to the W. part of the Kalahari Bush-Veldt on the W. Going from N. to S. the Kingdoms are those of the—

1. *Eastern Bamangwato*, capital, *Shoshong*.
2. *Western Bamangwato*, capital, on Lake Ngami.
3. *Bakuenas*, capital, *Molopolole*.
4. *Banguaketsc*, capital, *Kanye*.
5. *Barolong*s, capital, *Lothlakane*.
6. *Batalpins*, capital, *Tuang*.

The Eastern Bamangwato and the Barolong are the best of these Bechuana peoples, but all of them are capable of civilization, and progress is being made in this direction by Christian Missionaries who have settled among them.

v. **THE ORANGE RIVER FREE STATE**, which lies S. and S.W. of the Transvaal, between the Vaal and Orange rivers. It has Natal and Basuto-Land on the E., and Griqua Land West on the W. The *surface* forms a plateau of 5,000 ft. above the sea. It is well watered and fertile. Its *area* is 42,480 sq. m. and its *population* 65,000 whites and 10,000 natives. The *capital* is Bloemfontein (pop. 2,000). The chief *industry* at present is diamond digging; *grazing* and *agriculture* come next in importance. A fair amount of *trade* is done with the Transvaal and Cape Colony in wool, skins, ostrich feathers, gold, and diamonds. The *government* is republican in character; the President is elected for 5 years, and the power is in the hands of a legislative and executive chamber. The *language* is Dutch, the *religion* protestant.

vi. **ZULU LAND**, which lies between the Indian Ocean on the E., Natal on the S., Transvaal on the W., and the Portuguese possessions on the N. The

coast-line is some 200 m. long, but it embraces no harbours or landing places. The *surface* is low, bushy, and unhealthy from the coast to some distance inland; the midland tracts are hills, and well adapted for grazing cattle, while the W. part consists of a high rolling upland, intersected from E. to W. by deep watered gullies, and dotted over with small conical hills. The country is well watered; the chief *rivers* being the Tugela with its *tributary* the Blood River, and the Umvolosi. The *climate* is warm, moist, and equable; healthy on the uplands, but unwholesome in the valleys and on the coast. The chief *productions* are maize, millet, and sweet potatoes. The only *communications* are a few bad waggon tracts,—neither the rivers nor the rivulets are navigable. The *area* of the country is about 15,000 sq. m. and the *population* variously estimated at from 150,000 to 300,000, who all speak the Zulu *language*. With regard to internal administration, since the conquest of the country by England in 1879 the office of king has been abolished and the tribes are governed by petty chiefs with each of whom is settled a white Resident.

vii. **NATAL**,¹ which is a British colony on the S.E. coast. It is bounded on the N. by Zulu-Land, on the S. by Kaffraria, and on the W. by Cape Colony and the Orange River Free State. Its *surface* is covered to a large extent with ramifications from the Drakenberg mountains, on the W. frontier, which descend into a broad belt of rolling pasture land stretching to the coast. The country is well watered, but none of its rivers are navigable. The Tugela with its large *tributary* the Buffalo river forms the N. boundary. The *climate* is healthy and agreeable, and much of the *soil* is rich. The *productions* include wheat, maize, sugar, arrow-root, and coffee. The *area* of Natal is 18,750 sq. m., and its *population* 325,512 souls, of whom about 18,000 are Europeans. For *Administrative purposes* the colony is divided into 9 *counties*. The chief *towns* are Pieter Maritzburg (pop. 7,000), the capital, which is 50 m. inland, and Durban or Port Natal (pop. 8,000) a handsome town with a good harbour. Natal was erected into a separate colony in 1856.

viii. **KAFFRARIA**, or independent Kaffir Land, lies on the S.E. coast, having Natal on the N. and Cape Colony on the W. and S. Its *area* is about 20,000 sq. m.; its *population* about 500,000. The *surface* is hilly and well watered, the *climate* salubrious, and the *soil* fertile. The *people* are Kaffirs—a race physically and intellectually superior, but morally inferior to the Hottentots—who generally live in hordes and are governed by hereditary and absolute chiefs. They are heathen, but efforts are being made by missionaries to christianize them. They have no *towns* of any importance.

ix. **CAPE COLONY**, which, including British Kaffraria, Basuto Land, Griqua Land, and Transkei, extends from the Atlantic Ocean on the W. to Kaffraria and Natal on the E., and from the Indian Ocean on the S. to the Orange River, and, in the case of Griqua Land West, beyond it on the N. The physical features generally of this great region are described pp. 173, &c. The *area* is estimated at 237,484 sq. m., and the *population* at 625,061 souls. For *Administrative purposes* the colony is divided into 2 *Provinces*, the Eastern and the Western Province. Each of these is divided into 16 *electoral districts*, which are again subdivided for fiscal and magisterial purposes. The chief *towns* are Cape Town (pop. 33,239) the capital of the colony, near Table Bay, a well-frequented and busy seaport, and the seat of a university and a bishopric; Graham's Town, (pop. 6,903) which lies 500 m. E. of Cape Town, and 25 m. inland is the capital of the E. Province and the seat of a bishopric; and Port Elizabeth (pop. 13,049) the chief sea-port of the E. Province, which lies on Algoa Bay. The principal *industries* are *agriculture*, *grazing*, and *mining*; the only *manufacture* is that of making wine; the *commerce* embraces the *export* of wool, copper ore, feathers, sheepskins, ivory, and wine; and the *import* of manu-

¹ Natal was so called by its discoverer, Vasco da Gama, because he discovered it on Christmas Day (1497).

factured goods from Great Britain. The *communications* include some fairly good roads, 862 m. of railway, and a considerable number of *telegraphic lines*. The *government* is "Local Parliamentary or Responsible Government." The power is vested in a Governor, who is assisted by an executive and legislative council and a House of Assembly. *Education* is fostered by the State, and there are primary schools in every district in which English and Dutch are taught. The religion is *Christianity* and a large majority of the people are *Protestants*.

x. The **KALAHARI DESERT**, which extends N. from the Orange River for a distance of 900 m., is, in places, 500 m. wide, and embraces an *area* of upwards of 260,000 sq. m. The desert contains some beautiful grass plains which abound with game, and those parts where water can always be got are well adapted for farming. There are large forests of bush and timber, and in many districts coal and copper are plentiful. The *climate* is exceedingly healthy.

xi. **NAMAQUA LAND**, which extends from the Atlantic Ocean on the W. to the Kalahari Desert on the E. and from the Orange River on the S. to Damara Land on the N. The *coast region* is a sandy waste, but in the E. about the Great Fish river there are good grazing grounds and mountains rich in minerals. The *area* of the country is about 70,000 sq. m. and the *population* not more than 20,000. They include Namaquas, Hottentots, Bushmen, Griquas, and Damaras. They live under petty captains in small locations, and are lawless and dangerous and frequently plunder traders.

xii. **DAMARA LAND**, which also lies between the Atlantic Ocean and the Kalahari Desert, and runs N. from Namaqua Land to the holdings of the Ovampo tribes, the *coast line* is a sandy desert, but there are mountains in the E. parts and plenty of minerals. The *population* has been estimated at about 118,000, and consists of Damaras, Bushmen, Namaquas, and a few Europeans. Each tribe has its own hereditary chief and they are moderately rich in cattle.

xiii. **OVAMPO LAND**, which lies W. of the Kalahari Desert, and N. of Damara Land, but the position of which is not well defined, the territory embraces some mountains which are said to be rich in minerals. There is splendid grazing ground, with plenty of water, and most favourable for cattle and sheep. The *area* is said to be 60,000 sq. m., while the *population* is only 30,000. The people are, however, industrious and grow excellent corn and vegetables.

V. WEST AFRICAN COUNTRIES.

This section embraces the region of *Lower Guinea*, which stretches from Cape Frio on the S. to Cape Lopez in the N., a distance of about 750 m. Its *area* has been estimated at 300,000 sq. m. The *Surface* is mountainous in the interior,—the chief ranges being the Mossamba, Mogongo, Crystal, and Complida mountains—but low from the coast for some distance eastwards. The whole region is well watered, being traversed by the *rivers* Cubango or Ovambo, Cunene, Coanza, Zaire or Congo or Livingstone, and the Ogowai. The *climate* is tropical, but healthful and pleasant on the high grounds. The *productions* include cattle, in vast numbers; rice, maize, spices, pepper, sugar, coffee, and tropical fruits; tobacco, and cotton; gold, silver, copper, sulphur, and petroleum. The *population* is dense, and consists of various Negro tribes, who are of good physical development, but superstitious, ignorant, and indolent.

Lower Guinea comprises four more or less organized countries, viz.

i. The **PORTUGUESE KINGDOM of ANGOLA** which extends from Cape Frio to the Dande river and is divided into the *three Provinces of Mossamedes, Benguela, and Angola*. The *capital* Loanda is situated on the beautiful bay of Bengo, and is the residence of the governor of the State. It is an important seaport, with a *population* of some 12,000 souls. The Baobab, or "monkey fruit tree" is

one of the most abundant products, supplying valuable material for paper; palm oil, india rubber, red copal, white gum, ivory, &c., are common products.

ii. The **KINGDOM of CONGO**, which once extended from the Dande to the Zaire but is now reduced to a small territory in the vicinity of the capital (Congo). The Portuguese, who held it in military occupation for some years, abandoned it in 1870.

iii. **LOANGO**, a native kingdom, which extends along the coast for 130 m. N. of the Zaire. It is a hilly and thinly wooded country, which has Loango on the coast, for its capital. The chief products are coffee, cotton, mandioca, bananas, palm oil, gum, wax, ivory, &c. The country is densely populated, chiefly by Congo Negroes.

VI. NORTH-WEST AFRICAN COUNTRIES.

This section embraces the territories of *Upper or North Guinea*, and *Senegambia*, wherein are included also several *European Colonies and Settlements*.

i. **UPPER GUINEA**, occupies a broad tract of coast territory stretching from Cape Lopez to Senegambia, *i.e.*, from the 1st parallel S. to the 10th N., a distance of more than 2,000 m. The *coasts* are everywhere low except along the Bight of Benin and about Sierra Leone, and present a dead level which in many places extends for 30 or even 50 m. inland. In the S. are the *Camaroon Mts.* (13,000 ft.) and in the E. the *Kong Mts.* The country is drained by numerous rivers, some of which draw their waters from the distant interior. The chief of them are the *Niger* or *Quorra*, the *Folta*, and the *Assinee*. The *climate* is hot, and moist, and notoriously fatal to Europeans; the *productions* include lions, leopards, elephants, hippopotami, monkeys, parrots, serpents, and crocodiles; palm oil, cocoa nuts, yams, sugar, coffee, spices, drugs, gums, ivory, wax, and dyes. The *population* is estimated at about 8,000,000, and consists of a few European colonists, and vast numbers of Negro nations, who are much alike in physical qualities and manner of living, but who differ considerably in their morals and dispositions. Upper Guinea includes various *Kingdoms, States, Districts* and *Settlements*, the chief of which are given in the following table:—

STATE, DISTRICT, &c.	CHIEF TOWN.	STATE, DISTRICT, &c.	CHIEF TOWN.
1. Benin ¹ (District) . . .	<i>Benin.</i>	4. Ashanti ⁴ (Kingdom) .	<i>Coomassie.</i>
2. Yoruba ² (Kingdom) .	<i>Abbeokuta.</i>	5. Liberia ⁵ (Republic) .	<i>Monrovia.</i>
3. Dahomey ³ (Kingdom)	<i>Abomey.</i>		

Obs. The principal *industry* is *agriculture*; *manufactures* are not unknown, but they are unimportant; *commerce* includes a degrading traffic in slaves, together with the *export* of palm oil, skins, cocoa nuts, cotton, drugs, dyes, ivory, ostrich feathers, and gold dust. The *governments* are despotic monarchies, and the absolutism of small chiefs.

ii. **SENEGAMBIA**, stretches from Sierra Leone to the Senegal river, but has no definite frontiers on the E. The *surface* is flat and low near the coast, but

¹ *Benin* lies up on the W. of the Zaire or Congo.

² The Kingdom of *Yoruba* lies N.E. of *Dahomey*, and extends about 200 m. inland. The slave trade is still active here, and the state is perpetually embroiled in petty wars.

³ The Kingdom of *Dahomey* stretches N. from the Slave Coast to the Kong Mountains, a distance of from 150 m. to 200 m. The king is a savage despot, whose body-guard is composed of 2,000 amazons, out of whom every vestige of feminine gentleness is driven by their military training.

⁴ *Ashanti* is the most powerful Negro state in Upper Guinea. It is an exceedingly fertile and productive country. It was invaded by British troops in 1874, and its capital, *Coomassie*, was destroyed. The *Ashantis* are brave and intelligent.

⁵ The Republic of *Liberia* is a settlement of the American Colonization Society, which was founded in 1822 as a refuge for free Negroes from the United States. It occupies a considerable extent of coast. Its capital was named after President *Monro*.

hilly towards the S.E. The centre is occupied by a great desert. It is watered in the N. and S. by numerous *rivers*, the most important of which are the Grande, Gambia, and Senegal. The climate is most insalubrious and too generally proves fatal to Europeans. The *soil* is fertile and yields the most luxuriant and vigorous vegetation. The chief *products*, are the oil-yielding palm, the Baobab, or monkey bread tree, the largest tree known, cotton trees, acacias, which yield gum arabic, and mangrove trees; gold and iron. The *population* is estimated at about 10,000,000, and consists principally of three Negro nations, viz., the Mandingoes, Fulahs, and Wolofs. The *country* is occupied by a large number of small Native States, belonging to tribes of the three great Negro Nations, and various European Settlements, of which the most important are French.

iii. **EUROPEAN SETTLEMENTS**, within the limits of Upper Guinea and Senegambia are *British, French, and Portuguese Settlements*.

1. *British Interests* here comprise, 1. the Gold Coast Colony with Lagos; 2. West African Settlements (Sierra Leone and Gambia).

Obs. 1. **Gold Coast Colony** was constituted by charter 24 July, 1874. The phrase *Gold Coast* is the general appellation of that part of the coast of Upper Guinea which lies between 2° E. and 5° W. long. The colony embraces all the British settlements within these limits, viz., *Azim, Dixcove, Secondee, Elmina, Cape Coast Castle, Anamaboe, Winnebah, Accra, Addah, and Quitta*; together with *Lagos*, including *Badagry, Palma, and Leckie*, which lie 2° further E. This colony is under a Governor-in-chief, with an Administrator at Lagos. There is one Executive and one Legislative Council. Sovereignty is exercised over the sea-board intervening between. All these settlements and the adjacent territory, where we are in treaty with the tribes, is regarded as a British Protectorate. The seat of government is *Accra*. Area, 16,699 sq. m. Population, 580,391.

Obs. 2. The **West Africa Settlements** include *Sierra Leone* with *Sherboro* and the *Isle de Los*, and *Bathurst*, a small but important colony at the mouth of the river Gambia. Area, 537 sq. m. Population, 52,936.

2. *French interests* embrace the Senegal settlements, of which *St. Louis, Portendik, and Fort Gorée* are the chief. The Governor resides at Fort St. Louis, the Lt. Governor at Fort Gorée.

3. The *Portuguese Settlements* are at *Domingo, Cacheo, The Bissago Islands, and Jeba*.

VII. NORTH CENTRAL AFRICAN TERRITORIES.

This section includes some of the chief Native States of Sahara, and Soudan or Nigritia. They all lie in the S. part of the Desert and between Senegambia on the W. and the Egyptian territories on the E. They are

i. **BAMBARRA**, which lies E. of Senegambia, and is traversed by the Niger or Joliba. It embraces much excellent pasture land and possesses large herds of cattle, sheep, goats, and horses. The *population* consists of Negroes of the Mandingo and Fulah nations, who are Mohammedans and who are more civilized than the other Negro tribes. The *capital* is Sego, a town of 30,000 inhabitants on the Joliba. The chief trading depôt is Sansandig.

ii. The **KINGDOM of MASSINA** which consists of a large area on both sides of the Upper Niger between Bambarra and Timbuctu. This State also is traversed by the Niger, near the right bank of which lies Hamda-Alláhi the capital. Jenne (pop. 8,000) on the great island of Massina in the Niger, is one of the chief centres of the Soudan commerce, and does a large trade in salt and gold.

Obs. **Timbuctu** (pop. 13,000), 9 m. from the Niger, on the left bank, is a famous emporium for the commerce between the North and the Soudan States. Though this town is situated in the country of the Tademekket, it owns no master and keeps aloof from the feuds of the neighbouring States.

iii. The **EMPIRE of GANDO** which lies E. of Massina and S. of Timbuctu and on both sides of the Niger. It is made up of loosely confederated tribes; but it

holds an important place in this part of Africa for its intelligence and industry; the people belong to the Hausa branch of the Fulahs, the most intelligent of all the African Negroes. The chief town is Gando; Rabba, and Egga on the Niger are two important trading towns.

iv. The **EMPIRE of SOKOTO** which stretches E. from Ganda to Bornu. Its area is about equal to that of the British Isles. It also is thickly inhabited, by an intelligent and industrious people. The capital, Sokoto (pop. 20,000) lies near the N. W. frontier. *Kano* (30,000) and *Yokoba* are great trading centres, and famous places for their manufacture of cotton stuffs.

v. The **KINGDOM of BORNU**, which lies between Sokoto on the W. and Lake Chad on the E. It is one of the most powerful of the Negro States, and possesses, a charming and fruitful territory, larger in area than England. Its population is of the Kanuri race who are Mohammedans. The capital, Kuka (pop. 60,000) is a famous trading place, possessing one of the most important markets in Central Africa.

vi. The **KINGDOM of BAGHERMI** which lies S.E. of Bornu and is traversed by the river Shari. It is a powerful State with a people of warlike spirit and industrious habits, but cruel and bloodthirsty and much addicted to slave-raiding expeditions in the bordering States. The capital is Masena near the centre of the country.

vii. **WADAI**, a Sultanate which lies E.; and N.E. of Baghermi, and was unknown to Europeans until 1873, when Dr. Nachtigal succeeded in visiting it. The land is poor and the people rude, violent, drunken, and quarrelsome, and have a great hatred to strangers. They are however well governed, and do a largish trade in ivory, slaves, and ostrich feathers. The capital is Abcshr. Wura the former capital has been destroyed.

VIII. SOUTH CENTRAL AFRICAN COUNTRIES.

This division includes the unexplored region of Central Africa which lies S. of Soudan and numerous States of the lake region which have become known to us through the travels of Livingstone, Burton, Speke, Grant, Baker, Cameron, Stanley, Serpa Pinto, Dr. Holub, and others.

The chief of these are

i. **UGANDA**, which lies about the N. parts of Lake Victoria Nyanza, and has recently attracted much notice from the friendly reception given to Europeans by Mtesa its king.

ii. **UNYAMWESI**, which lies S. of Lake Victoria Nyanza, occupies a large hilly tableland and has Kaseh for its chief town.

iii. **URUA**, which lies on both sides the Lualaba, stretches N. from S. of Lake Moero nearly to Nyangwe, covers an area as large as the British Isles and, being parcelled out into numerous Captaincies, boasts of something like political organization.

iv. **ULUNDA**, a large State lying W. and S.W. of Urua, which is governed by a hereditary chief called Muata Yanvo, and has for its chief town Kabebe.

v. **LUNDA**, a small State S.E. of Urua, on the E. side of the Webb River between lakes Bangweolo and Moero, which has Casembe for its chief town.

vi. **MARUTSE-MABUNDA**, a large and most fertile State on the N. of the Upper Zambesi. It embraces the greater part of the former Makololo Kingdom and has Shesheke for its capital. The people are Marutse, have a civilization of their own, and are much superior in mental capacity to the African tribes S. of the Zambesi.

Obs. 1. In addition to the above-named there are countless petty kingdoms, chiefships, and tribes among the swarming populations of Negro-land.

THE NEW WORLD, OR AMERICA.¹

Latitude. Between 72° N. and 53° 56' S.
Greatest Length, 8,750 m.

Longitude. Between 34° 50' and 168° W.
Greatest Breadth, 3,250 m.

Obs. These limits define the extreme points of the *Continent*, viz., N., *Murchison Point*; S., *Cape Forward*; W., *Prince of Wales Cape*; and E., *Point Balea*.

Estimated Area, nearly 16,000,000 sq. m., including Greenland and all the insular portion of the New World.

Obs. The *New World* is so called because it did not come under the general knowledge of geographers so soon as the Old World; but it comprises much of the oldest known strata, has given up some of the oldest remains of man, and has yielded evidences of a civilization which may well have been prior to that of W. Europe.

It is also called the *Great Western Continent*. Its physical features are on a grand scale. The largest rivers and lakes, the most expansive valleys, the longest mountain ranges, the most magnificent forests, and the most stupendous development of volcanic phenomena in the world belong to this continent.

The New World consists mainly of two huge masses of land, of very unequal areas, and named respectively *America* and *Greenland*.

America, again, is composed of two parts, which are so nearly equal in size, and connected together by so small an isthmus, viz., the isthmus of Panama or Darien, from 28 m. to 40 m. broad, that they are universally regarded as forming two Continents. These, from their relative positions, are distinguished as *North America* and *South America*. A subdivision, called *Central America*, belongs to N. America.

I. NORTH AMERICA.

PHYSICAL GEOGRAPHY.

Latitude. Between 16° and 72° N. *Longitude.* Between 55° 40' and 165° W.
Area. About 8,000,000 sq. m. (including insular portions).

Obs. 1. The general figure of this continent is *triangular*.

Obs. 2. Greatest length, about 4,500 m.; greatest breadth, about 3,300 m.

POSITION AND BOUNDARIES.—N. America forms the N. W. portion of the New World. It is bounded on the

N. by the Arctic Ocean; E. by the Atlantic; S. by the Gulf of Mexico, Central America, and the Pacific Ocean; W. by the Pacific Ocean, and Behring Strait.

COASTS.—The shores are deeply indented by the oceans, especially on the N. and E. The *Coast-line* has been computed at 29,969 m., or 1 m. of coast to every 265 sq. m. of area. The chief coast features are the

1. **Capes**, Barrow, Bathurst, Murchison, and Chudleigh, on the N.; St. Lewis, Charles, Sable, Cod, May, Henry, and Hatteras, on the E.; Sable, St. Blas, and Catoche, on the S.E.; Corrientes, St. Lucas, and Eugenio, on the S.W.;

¹ America was so called from Amerigo Vespucci, who in 1497 A.D. landed upon the continent S. of the Equator.

Conception, Mendocino, Blanco, Foulweather, Flattery, on the W. ; Romanzov, Prince of Wales, Hope, and Icy¹ Capes, on the N.W.

2. **Inlets**, Mackenzie, Liverpool, Franklin, Coronation, Melville, Hudson, and Baffin Bays on the N. ; St. Lawrence, Fundy, Delaware, and Chesapeake Bays on the E. ; Gulf of Mexico, on the S.E. ; the Gulfs of Tehuantepec, and California, on the S. ; Bodega, and Trinidad Bays on the W. ; Bristol Bay, Norton Sound, and Kotzebue Sound, on the N.W.

3. **Straits**, Davis Strait, (leading from the Greenland Sea to Baffin Bay), Hudson Strait, (leading from the Greenland Sea to Hudson Bay), Strait of Florida, (leading from the Atlantic to the Gulf of Mexico), on the E. ; and Behring Strait, (leading from the Atlantic to the Arctic Ocean, and separating the Old and New Worlds), on the W.

ISLANDS.—The islands belonging geographically to N. America are very numerous. The most important of them are, on the

1. **North.** The *Arctic Archipelago*—including *Parry Islands*, (viz.—Prince Patrick, Melville, Bathurst, Grinnell, Cornwallis, and many smaller islands), *Banks Land* ; *Prince Albert*, *Wollaston*, and *Victoria Land* ; *N. Devon* ; *N. Somerset* ; *Cockburn Land* ; *Baffin Land* ; *Cumberland Island* ; *Southampton Island* ; and numberless small islands interspersed among them.

2. **East.** *Newfoundland*, *Anticosti*, *Prince Edward*, *Cape Breton*, *Long Island*, *the Bermudas*, *the Bahamas*, and the *West India Islands*.

3. **West.** *Vancouver*, *Queen Charlotte*, *Prince of Wales*, *Kadiak*, *Aleutian Isles*, and *St. Lorenzo*.

SURFACE.—The surface of N. America embraces five well marked physical regions, viz.,

1. *The Great Plain*, N. of the 50th parallel, a large part of which is a bleak and barren waste, interspersed with lakes, and resembling Siberia in its general aspects. 2. *The Pacific Highlands*, which extend W. from the Rocky Mountains to the Ocean. 3. *The Valley of the Mississippi*, which is rich and well wooded on the E. side ; bare, but not unfertile in the middle ; dry, sandy, and desert like on the W. 4. *The Plateau of Mexico*, with narrow and low-lying plains on its E. and W. edges. 5. *The E. Slopes of the Alleghany Mountains*, a region of natural forests.

The chief

1. **Mountains** belong to three distinct Systems, viz.—*a.* The Rocky Mountain System ; *b.* the Alleghany or Appalachian System ; and *c.* the Central American System.

Obs. 1. The **Rocky Mountain System**, consists of a lofty and continuous belt, from 450 to 900 m. broad, of mountainous country which stretches along the W. side of the continent from the peninsula of Alaska in the N. to Central America in the S., a distance of 3,000 m., and includes two distinct chains, which are more or less parallel to one another, and an included highland region. These are the

a. Eastern Chain, which forms the E. buttress of the Pacific Highland, includes many longitudinal sections separated from one another by river passes, throws out many branches towards the desert, forms the main water parting, and embraces many of the loftiest summits, of the continent. The chief parts of this gigantic chain are the

(*a.*) *Oregon or Rocky Mountains proper* which stretch S.E. from the vicinity of the 64th parallel to the South Pass, embracing the peaks *Mt. Brown* (16,000 ft.), *Mt. Hooker* (15,700 ft.), and *Fremont's Peak* (13,570 ft.).

(*b.*) *Medicine Bow Mountains*, which extend S.E. from South Pass to the Arkansas River, and include *Evan's Peak* (14,430 ft.), *Long's Peak* (14,271 ft.), *Pike's Peak* (14,174 ft.) and other summits of great height.

¹ Icy Cape is notable as marking the extreme point reached by Captain Cook, on his third and last voyage, in 1778.

(c.) *Sierra Guadalupe*, which runs S., under different names, to the Isthmus of Tehuantepec and is surmounted by the *Spanish Peaks* (13,624 ft.), and the volcano of *Orizaba* (17,347 ft.).

(d.) *Sierra Madre*, a W. branch of the Eastern range which traverses the Plateau of Mexico from N. to S. running more or less parallel with the *Sierra Guadalupe*.

b. *Western or Pacific Chain*, which is generally parallel with the Eastern Chain and runs near the coast from the Peninsula of Alaska to the end of the Californian Peninsula, bearing in the different parts of its course, different names, and embracing some of the highest peaks of the system. The chief sections are the

(a.) *Coast Range or Sea Alps*, which run from Alaska to the Fraser River, and include *Mt. St. Elias* (17,900 ft.) said to be the highest point in N. America, and *Mt. Fairweather* (15,500 ft.), both volcanoes of occasional activity.

(b.) *Cascade Range*, which bends S.W. from the Fraser River to *Mt. Shasta* and embraces *Mt. Baker* (11,100 ft.), *Mt. Rainier* (12,360), *Mt. St. Helen's* and *Mt. Hood*. This range is divided into two sections by the Columbia River, which goes through it from E. to W.

(c.) *Californian Chain or Coast Range*, which runs S. from the Klarnath river to the extremity of the California Peninsula, and includes *Mt. Shasta* (14,440 ft.) and other summits.

c. The *Included Highland Region*, between the Eastern and Western Chains, which has a mean elevation of nearly 5,000 ft. and falls naturally into three regions, each having its own system of mountains, viz.,

(a.) *The Northern Region*, which is traversed from N. to S. by the *Peak Mountains*, and the *Bitter Root Mountains*.

(b.) *The Central Region*, or *Great Basin*, which has the *Salmon River Mountains* on the N., the *Sierra Nevada* on the W., and the *Wahsatch Mountains* on the S.

(c.) *The Southern Region*, which is buttressed on the W. by the *Sierra Sonora*.

Obs. 2. The *Appalachian or Alleghany System* occupies a belt of country of some 1,500 m. long, and of from 150 to 200 m. broad in the S.E. part of the continent. It runs N.E. and S.W. from the St. Lawrence in the N. almost to the Gulf of Mexico in the S. nearly parallel with, and from 50 to 150 m. W. from the Atlantic. The system embraces several ranges, which are generally parallel to the main axis, and include several fertile valleys. The Eastern range is called the *Blue Ridge* nearly throughout its whole length. The S.W. range is called the *Cumberland Ridge*. The section of the system between the Mohawk and St. Lawrence Rivers forms the *Adirondack Mountains*. The highest peaks in the system are *Black Dome* (6,707 ft.) and *Mt. Washington* (6,288 ft.).

Obs. 3. The *Central American System* consists of a combination of the Andes of S. America, or of the Rocky Mountains of N. America. It traverses the narrow and continuous strip of land which connects N. and S. America, skirting throughout the Pacific sea-board. This system does not attain the loftiest elevations, but it is deeply interesting on account of its many active volcanoes. It falls into three distinct groups, viz.

(a.) *The Mountains of Costa Rica or Cordillera of Talamanca*, which traverse the entire republic, are covered with impregnable forests, and attain a general height of about 7,000 ft. They include many volcanoes, four at least of which are in activity. The loftiest summit is the volcano *Irazu or Cartago* (11,502 ft.).

b. *The Mountains of Nicaragua and Honduras*, which reach an elevation of 8,000 ft. N.W. of Lake Nicaragua. The volcanoes of Nicaragua lie among the W. outliers of the Cordillera.

(c.) *The Mountains of Guatemala*, which traverse that State from S.E. to N.W. not far from the Pacific, and send off numerous branches towards the N.W. They include many volcanoes, 6 at least of which are active. *Agua* (12,250 ft.) is said to cast forth water and stones instead of fire.

2. Plateaux. North America contains two great Highland regions, viz.,

a. *The Pacific Highlands*, which cover a vast belt on the W. side of the continent, and extend from the Arctic Ocean in the N. to the Isthmus of Tehuantepec on the S. They include three great Tablelands, viz., one in the N. part, between the Rocky Mountains and the Sea Alps; another in the centre, called the "Great Basin," which stretches from the Rocky to the Cascade Mountains; and a third in the S., called the "Plateau of Mexico, or Anhuac."

b. *The Atlantic Highlands*, which lie on the E. side of the continent, and are divided by the valley of the St. Lawrence into a N. and a S. region.

These embrace respectively the Plateau of Labrador, which lies between Hudson Bay and Davis Strait, and the Appalachian Plateau, which lies immediately W. of the mountains of that name.

3. **Plains.** Notwithstanding the number and grandeur of the Mountain Systems which cover the New World in so many of its parts, yet viewed as a whole, as to its most striking features and character, it is a region of plains. Plains of very small elevation above the sea occupy at least three-fourths of the surface of N. America.

The great region between the Pacific and Atlantic Highlands forms one vast triangular plain, the base of which rests upon the Arctic Ocean, and the apex on the Gulf of Mexico. About midway between the shores of the Arctic Ocean and the Gulf of Mexico there runs, from the Atlantic Highland to the Pacific Highland, a slight swelling elevation called "The Height of Land," which divides this great central plain into two parts, sloping towards the N. and S. respectively. Various districts of this extensive level region bear specific names; as,

a. *The Northern Plains*, which lie between the Arctic Ocean and the "Height of Land," which are bare, cold, wet, and contain several great lakes.

b. *The Great Western Plain*, which stretches S. from the "Height of Land" to the Gulf of Mexico, and lies on the E. slope of the Atlantic Highlands.

c. *The Prairies* ("meadows") or *Savannahs* ("sheets"), which lie chiefly in the middle valley of the Mississippi.

d. *The Plains of the Mississippi*, which lie in the lower valley of that river.

Obs. Much of this vast region of plains is covered with dense forests, and a large portion is doubtless doomed to eternal sterility on account of the severity of its climate.

DRAINAGE.—The copious drainage of N. America belongs to *five* great basins, and includes some of the mightiest drainage agencies in the world. The chief of them are the

1. **Rivers.** In the number and magnitude of her navigable rivers America is greatly superior to the Old World. The most important of them are those flowing into the

a. *Arctic Ocean*, viz., the Colville, Mackenzie, Coppermine, and Great Fish River.

b. *Hudson Bay*, viz., the Chesterfield, Churchill, Saskatchewan, Nelson, and Severn.

c. *Atlantic Ocean*, viz., the St. Lawrence, St. John, Hudson, Delaware, Potomac, and Roanoke.

d. *Gulf of Mexico*, viz., the Alabama, Mississippi, Colorado, and Rio Grande.

e. *Pacific Ocean*, viz., the Santiago, Colorado, into the Gulf of California, Sacramento, Columbia, Fraser, and Yukon or Kwichpak.

Obs. 1. The **Mackenzie River** is one of the largest rivers of the globe, draining an area of 550,000 sq. m. It rises in the Great Slave Lake, flows generally N.W., and, after a course of nearly 1,000 m., falls by numerous mouths into the Arctic Ocean. The Mackenzie is connected with a complicated system of lakes, and may have for its remotest sources the Athabasca, and the Peace River, feeders of the Slave Lake. In this case the river would be upwards of 2,000 m. long. Its chief tributary is the Turnagain, on the left bank. The Mackenzie passes Forts Halkett, Liard, Simpson, Norman, Franklin, and Good Hope.

Obs. 2. The **Saskatchewan**, ("Swift Current") is formed by the union of the N. and S. Saskatchewan, which rise in the Rocky Mountains, about 4' 30" apart, and flow in a generally E. course to their junction. The river thus formed flows E. by a tortuous course to its embouchure in Lake Winnipeg. It is navigable from

its mouth to Rocky Mountains House, on its N. branch, a distance of 1,000 m. Its waters are carried from Lake Winnipeg to Hudson's Bay by the *Nelson*, and *Severn*.

Obs. 3. The St. Lawrence is a mighty river which, by a N.E. course of 2,200 m. long, drains an area of 600,000 sq. m. It has its ultimate source in the small stream *St. Louis*, which falls into the W. extremity of Lake Superior. Passing through all the great lakes, it flows N.E. to the Atlantic, which it reaches through the Gulf of St. Lawrence. The name *St. Lawrence* is properly applied only to that part of the river between Lake Ontario and the sea. The chief tributaries are the *Ottawa*, *St. Maurice*, and *Saguenay*, on the N.; and the *Richelleu* and *Chaudiere*, on the S. bank. The *St. Lawrence* forms part of the boundary of the United States, and with its tributaries embraces about 4,000 m. of navigable waters. It flows past the towns *Detroit*, *Buffalo*, *Montreal*, and *Quebec*.

Obs. 4. The Mississippi ("the great and long river,") with the *Missouri* ("muddy river"), the longest river in the world, has its remotest sources among the Rocky Mountains in the state of Montana. Its general course is E., S.E., and S., and it carries off to the Gulf of Mexico the drainage of almost all the territory between the Rocky and Alleghany Mountains. Its length is estimated at 4,300 m., the area which it drains at 1,350,000 sq. m., and the total length of its navigable waters at 35,000 m. The principal tributaries of the *Missouri* branch are the *Nebraska*, and *Kansas*; of the *Mississippi*, the *Minnesota*, *Arkansas*, and *Red River*, on the W.; the *Wisconsin*, *Illinois*, and *Ohio*, on the E. bank.

Obs. 5. The Rio Grande del Norte, rises in the Sierra Madre, flows S. and S.E., and after a course of 1,800 m., falls into the Gulf of Mexico. Its principal tributary is the *Pecos*, on the N. bank. The *Rio Grande* is navigable to *Kingsbury Rapids*, 450 m. from the Gulf of Mexico.

2. **Lakes.** The vast lakes of N. America contain more than half the fresh water of the globe, so that N. America may justly be called "the Continent of lakes." The most important lakes lie in the Great Central Plain. They are, going from N. to S., the lakes of the

a. *Mackenzie Basin*, viz., the *Great Bear*, *Great Slave*, *Athabaska*, *Wollaston*, *Deer*, and *Little Slave* Lakes.

b. *Saskatchewan Basin*, viz., *Winnipeg*, *Winnipegosis*, *Manitoba*, *Lake of the Woods*, *Rainy*, and *Seal* Lakes.

c. *St. Lawrence Basin*, viz., *Nipigon*, *Superior*, *Michigan*, *Euron*, *Erie*, and *Ontario* Lakes.

Obs. 1. Lake Superior is the largest body of fresh water known to exist. Its area is estimated at 82,000 sq. m., its greatest depth at 600 ft. It contains numerous islands, and receives about 200 streams. It discharges its surplus waters towards the S.E. into Lake Huron, by the River *St. Mary*.

Obs. 2. Lake Michigan, S.E. of Lake Superior, has an area of 22,400 sq. m., and its mean depth is said to be 1,000 ft. It belongs entirely to the United States, and has on its W. shores the towns *Chicago*, and *Milwaukee*.

Obs. 3. Lake Huron, E. by N. of Lake Michigan, has an area of 20,400 sq. m., and a depth of 900 ft. The great island *Manitoulin* divides the N. part of the lake from the rest, and this is called the *Georgian Bay*. It receives the surplus waters of Lake Superior, and Michigan, and is drained by the *Detroit River*, which connects it with the Lakes *St. Clair*, and *Erie*.

Obs. 4. Lake Erie, S.E. of Lake Huron, has an area of 12,000 sq. m. and a depth of 204 ft. It discharges itself into Lake Ontario by the *Niagara River*.¹

Obs. 5. Lake Ontario lies N.E. of Erie, and is the most E. of the five great lakes. Its area is 6,600 sq. m., and its general depth 500 ft. It receives the Rivers *Genesee*, *Oswego*, and *Trent*; and emits the *St. Lawrence*.

CLIMATE.—As N. America stretches from within the Frigid Zone to far within the Torrid Zone, its climate is naturally much varied. The climate, moreover, which is ordinarily normal to each of these zones, is, in the case of N. America, greatly modified by the

¹ The Falls of Niagara, between Lakes Erie and Ontario, are formed by the sudden leap of the river over a vast ledge of rock into an abyss below. The waters are divided into two streams by Goat Island, one on the N. or Canadian side,

which is called the "Horse Shoe Fall," and is 1,800 ft. broad and 154 ft. in perpendicular depth; and one on the S. side, 900 ft. broad and 165 ft. deep, called the "American Falls."

vast adjacent oceans, by the position of the Pacific and Atlantic Highlands, and by the enormous accumulations of ice on the Arctic shores; so that in N. America it is generally colder and wetter than in the corresponding latitudes of the Old World. There are also great local varieties of climate produced by special agencies. Such, *e.g.*, as the Arctic winds from the N., the Tropical winds from the S., the warm current on the W., and the cold one on the E. coasts.

SOIL.—The proportion of productive soil in N. America is not large, as compared with the vast area of that continent. For instance, a great portion of the territory N. of lat. 50°, is rendered barren and uncultivable by the rigours of the Arctic climate, and vast tracts of the Pacific highlands are sterile from drought and their stony constitution. But, on the other hand, nearly the whole of the Great Central plain, together with broad belts of territory on the shores of the Gulf of Mexico, the Atlantic, and Hudson Bay, are remarkable for their great fertility.

NATURAL PRODUCTIONS.—*The animals of N. America are generally smaller and less serviceable to man than those in the Old World. Great variety and luxuriance characterise the vegetation; whilst the mineral wealth of the country is most important, and practically inexhaustible. The table contains only the most characteristic productions of the Continent.*

ANIMALS.	VEGETABLES.	MINERALS.
Domestic. These have been all imported from the Old World.	Grain. Wheat, maize, rice, barley, oats, and millet are the most staple.	Precious Stones. Diamonds, found in California.
Wild. The grizzly bear, the puma or American lion, the bison or American buffalo, the Newfoundland, and Mackenzie River dogs; together with various species of wolf, fox, deer, sheep, and goat—are either peculiar or natural to N. America.	Fruits, include grapes, oranges, lemons, bread fruit, coffee, peaches, and all kinds of plum, apples, pears, and nuts in great variety and abundance.	Precious Metals. Gold and silver, which are found in both the Pacific and Atlantic Highlands.
The characteristic animals of this continent include also the white or polar bear, the brown bear, the elk or moose deer, the rein deer, the white fox, marten, otter, seal, walrus, and whale.	Fibrous Plants are chiefly represented by cotton, flax, and hemp.	Other Metals. Iron, copper, lead, tin, zinc, and mercury, all of which are found in numerous localities throughout the country.
Of Birds, various kinds of eagles, vultures, and hawks. Wild turkeys, waterfowl, partridges, and quails, are the most characteristic.	Medicines and Spices include sassafras, nux-vomica, jalap, vanilla, and pimento.	Other Minerals. Coal, salt, sulphur, marble, and various good building stone.
Reptiles are few, but they include the rattlesnake.	Timber of every kind abounds all over the continent, including valuable oak, pine, larch, maple, cedar, poplar, and walnut. The <i>Wellingtonia gigantea</i> , which grows to 400 ft. high, is found in California and other parts of W. America.	
	The potato, tobacco, maize and chocolate are indigenous to the New World.	

PEOPLE AND LANGUAGES.—The *population* of N. America is estimated at 52,055,957, and consists chiefly of 1. *Esquimaux*,¹ a dwarfish race, seldom exceeding five feet in height, who occupy the N. coasts and adjacent islands. They speak the *Esquimaux language*, of which, however, the dialects are numerous and widely diversified. 2. *Indians*,² or native Americans, who are now found principally in the N., S., and W. parts of the country. They belong to various stems, and speak different *languages*. 3. *Negroes*, who were imported from Africa as slaves. They have been emancipated to a large extent, and are being gradually civilized. They speak a mongrel form of English. 4. *Whites*, who include immigrants from all parts of the Old World. Their dominant language is English.

POLITICAL DIVISIONS.—N. America embraces the following countries, viz.

1. British N. America. 2. The United States of America, and Alaska.
3. The Republic of Mexico. 4. The Central American States. 5. The West Indies.

I. BRITISH NORTH AMERICA.

British N. America comprises all that part of the New World which lies N. of the 49th parallel and the basin of the great lakes, except the peninsula of Alaska which belongs to the United States. It includes the Dominion of Canada, and the Colony of Newfoundland.

Obs. The territories of British N. America are equal in area to those of the United States, but a large proportion of them is waste land.

i. THE DOMINION OF CANADA.

Latitude. Between 42° and 72° N. *Longitude.* Between 55° 40' and 141° W.
The estimated *Area* is 3,406,542 sq. m.

Obs. 1. The *extreme points* marked by these limits are Pelée Isle in Lake Erie, on the S.; Murchison Point, in Boothia, on the N.; Cape Charles, on the E.; and Mt. St. Elias, on the W.

Obs. 2. That part of Labrador which drains into the Atlantic is under the jurisdiction of Newfoundland.

POSITION AND BOUNDARIES.—Canada lies in the N. part of America. It is bounded on the

N. by the Arctic Ocean; E. by the Atlantic Ocean; S. by the United States; and W. by the Pacific Ocean, and the Peninsula of Alaska.

COASTS.—These comprise a great length; but much of their extent

¹ This term was originally applied to the natives who inhabited Labrador; it is now used to designate an Indian living in Arctic America and Greenland.

² The name given to the native inhabitants,

generally, of America by Christopher Columbus. When he discovered America he was under the impression that it was part of the Indian Islands, and called the people *Indians*.

is rendered, commercially, useless by the severe climate. The features to be noted are the

1. **Capes**, viz., Kay, Bathurst, Murchison, and Chudleigh, on the N.; Mugford, Charles, St. Lewis, Whittle, Gaspe, Canso, and Sable, on the E.
2. **Inlets**, viz., Mackenzie, Hudson, and Ungava Bays, on the N.; St. Lawrence, and Fundy Bays, on the E.

Obs. 1. Hudson Bay, so named after Henry Hudson who discovered it in 1610, is an inland sea of some 300,000 sq. m. in extent. Hudson Strait joins it to the Atlantic Ocean, but its waters are almost always closed up by ice.

Obs. 2. The Bay or Gulf of St. Lawrence is a large arm of the Atlantic, enclosed between the mainland and the islands Newfoundland, and Cape Breton. It receives the St. Lawrence River, and includes on its W. side Chaleur, and Miramichi Bays. It contains Prince Edward Island, Anticosti, and many other isles, and has important fisheries.

3. **Straits and Channels**, viz., Strait of Belle Isle (between the mainland and Newfoundland); the Gut of Canso (between Cape Breton Island, and Nova Scotia), on the E.; the Strait of Juan de Fuca (S. of Vancouver Island); Haro Strait (between the mainland and S.E. of Vancouver Island); and Strait of Georgia (between the mainland and the E. side of Vancouver Island).

ISLANDS.—These are numerous and large, and many of them very important. The chief of them are Newfoundland, Anticosti, Prince Edward Island, and Cape Breton, off the E. coast; Vancouver Island, and Queen Charlotte Islands, off the W. coast.

Obs. 1. Newfoundland, see p. 202.

Obs. 2. Anticosti, in the Gulf of St. Lawrence, belongs to the Province of Lower Canada. Its *people* are few, its *soil* poor, and its shores dangerous. The fisheries are important.

Obs. 3. Prince Edward Island lies in the S. of the Gulf of St. Lawrence, and is separated from New Brunswick and Nova Scotia by the Northumbrian Strait. Its *area* is 2,173 sq. m. The *surface* is mostly flat, but occasionally it swells into undulations; the *soil* is rich and fertile, and the climate mild and salubrious. It is generally well watered by small streams. There are but few *wild animals* on the island. *Grain* and *vegetables* are abundant. *Timber* of various useful kinds is plentiful; *flax* and *hemp* are easily raised. *Fish* abounds on all the coasts. The *population* is 94,021, and consists of English, French, and other European colonists, and of a few hundreds of Indians.

Obs. 4. Cape Breton forms part of the province of Nova Scotia, though physically separated from it by the Gut of Canso. Its *area* is something more than 3,000 sq. m., and its *population* (in 1871) 26,500, who are mostly of Scotch, Irish, and French extraction. Its *shores* contain some good harbours, amongst the most important of which are *Sydney* and *Louisbourg*. Its principal *exports* are timber, coal, and fish. Its *chief towns* are Sydney, the capital, Arichat, and Port Hood.

Obs. 5. Vancouver Island, (so called from Captain Vancouver of the royal navy, who first discovered that it was an island (1792)), lies at the S.W. extremity of British America, and forms part of British Columbia. It is separated from the mainland by the *Johnstone, Georgia, Haro, and Juan de Fuca Straits*. The island is 270 m. long, 50 m. broad, and has an *area* of 16,000 sq. m. Its shores are much penetrated by inlets of the sea, and embrace numerous commodious harbours. It is mountainous, rising in the centre to between 7,000 and 8,000 ft. high. Its *soil*, where there is any, is rich and productive, the *climate* good, and the *natural productions* varied and valuable. The principal *exports* are timber, fish, and coal. *Victoria*, the chief town, lies at the S.E. extremity of the island. It is a free port, with a population of some 6,000.

SURFACE.—In the extreme W., Canada is mountainous. In the W. centre, it is level, or only gently undulating; and in the E., it is varied with ranges of hills, valleys, and picturesque gorges. The chief features are the

1. **Mountains**, which lie in the W., and belong to the *Rocky Mountain System*, and in the E. on the Peninsula of Labrador. The principal ranges are the
 - a. *Rocky Mountains Proper*, which run S.E. from the 64th parallel to and beyond the S. frontiers, including *Mt. Brown* (16,000 ft.) and *Mt. Hooker*, (15,700 ft.), the culminating points of the system.
 - b. *Peak Mountains*, a W. and parallel range of the same system. They are sometimes called the *Gold Range*, on account of the gold which they contain.
 - c. *Babino Range*, which lies W. of the Peak Mountains, and runs parallel to them from the 60th parallel to the Fraser River.
 - d. *Cascade Range*, which lies along the W. edge of the Pacific Highlands, and is a prolongation of the same chain that traverses California. Its W. slopes are covered with dense forests, but its culminating points lie further S. in the territory of the United States.
 - e. *Watchish Range*, which runs S.W. and N.E. through the peninsula of Labrador, forming the watershed between the Atlantic and Hudson Bay.
 - f. *White Mountains*, on the S. side of the St. Lawrence.
2. **Plateau** of the Pacific Highland which occupies a broad belt in the W. part of the Dominion, stretching from N. to S. between the extreme ranges of the Rocky Mountain System.
3. **Plains**. From the W. plateau to the Atlantic Ocean, the dominion consists almost entirely of one vast plain which gently slopes towards the N. and N.E. It is deeply penetrated by Hudson Bay, which separates Labrador from the W. portion.

DRAINAGE.—The drainage of Canada belongs chiefly to the basins of the Arctic Ocean, Hudson Bay, the Atlantic Ocean, and the Pacific Ocean. The most important agents are the

1. **Rivers** which belong to the basin of the
 - a. *Arctic Ocean*, viz., the Mackenzie (p. 195, Obs. 1), Coppermine, and Great Fish rivers.
 - b. *Hudson Bay*, viz., the Chesterfield, Churchill, Nelson, Severn, Albany, Moose, and Abbitibi, from the W.; the Rupert, East Main, and Great Whale rivers, from the E.
- Obs. Connected with Hudson Bay are also the Saskatchewan (see p. 195, Obs. 2), Red River with its tributary the Assiniboine, and Winnipeg, which flow into Lake Winnipeg, and thence through the Nelson, and Severn into Hudson Bay.
- c. *Atlantic Ocean*, viz., the Hamilton, St. Lawrence, (p. 196, Obs. 3) with its great tributaries the Ottawa, and the St. John.
 - d. *Pacific Ocean*, viz., the Fraser, Simpson, and Yukon.

Obs. 1. The *Ottawa River*, second in size only to the St. Lawrence, rises in the Grand Lake, between the 47th and 48th parallels, and between the 77th and 78th meridians, flows S.E. between the provinces of Quebec and Ontario, drains an area of 80,000 sq. m., and after a course of 600 m., falls into the St. Lawrence near Montreal. Its navigation is much impeded by rapids and cataracts, but the water-power of this river is almost unlimited.

2. **Lakes**, which are numerous, and which belong to the Basins of the Mackenzie, Saskatchewan, and St. Lawrence Rivers (p. 196).

CLIMATE.—The climate is subject to extremes both of heat and cold, but it is, generally speaking, salubrious. Although the greater portion of the country lies within the N. Temperate Zone, there is longer duration of cold than of hot weather, frost often lasting six months in the year, in the E. parts, and snow four months. It is warmer and drier along the Pacific Highlands, where the annual

rainfall is only a few inches, the mean summer temperature 86° Fah., and the mean winter temperature 15°. During the winter months the N. portion of the Great Central Plain is swept by a bitterly cold wind from the N.W., which intensifies the rigour of that season.

SOIL AND NATURAL PRODUCTIONS.—A large proportion of the soil is from various causes utterly sterile. But very rich tracts stretch W. from Lake Superior, and along the left bank of the St. Lawrence. The *Productions* are varied and very valuable.

Wild Animals include the white, black, and brown bear, wolf, lynx, bison, elk, reindeer, musk ox, fox, marten, beaver, otter, seal, and walrus. Amongst *Wild Birds*, are eagles, vultures, hawks, turkeys, swans, geese, woodcock, and snipe. Of

Fish, cod, herring, mackerel, and salmon are most abundant.

Vegetables, and Fruits, are of the same species as are common in N. Europe.

Timber is abundant; and hemp, flax, and tobacco are largely produced.

Minerals include coal, iron, copper, gold, petroleum,¹ &c.

PEOPLE AND LANGUAGE.—In 1871, the *population* was 3,670,577, consisting of French, Irish, English, Scotch, and other European nations, and Indians of various tribes, but who are all descended from the *Algonquins* and *Iroquois*. The *Language* of the State and of literature is English.

POLITICAL GEOGRAPHY.

POLITICAL DIVISIONS.—The Dominion of Canada now embraces all the British possessions of N. America except the colony of Newfoundland. They are classed under eight Provinces, which, with their chief towns, are contained in the Table.

PROVINCES ²	CHIEF TOWNS.	PROVINCES.	CHIEF TOWNS.
1. Ontario ³	{ Ottawa, Toronto, ⁵ Hamilton.	5. Prince Edward Island ⁶	Charlotte Town.
2. Quebec ⁴	Quebec, ⁵ Montreal.	6. Manitoba ⁷	Fort Garry.
3. New Brunswick ..	Frederickton, St. John	7. North-West Terri- tories	
4. Nova Scotia	Halifax, Sydney.	8. British Columbia ⁸	Victoria, Hope.

Obs. 1. Ontario is divided into 45 counties; Quebec into 61; New Brunswick into 14; Prince Edward Island into 3; Nova Scotia into 18.

NOTES ON THE TOWNS.—The most populous towns are *Montreal* (107,225), *Toronto* (70,865), *Quebec* (59,699), *Halifax* (29,582), *St. John* (28,805), *Hamilton* (26,715), and *Ottawa* (21,545).

¹ Petroleum yields also *Paraffin Oil*, *Naphtha*, *Benzine*, and various excellent oils for machines. It forms also the basis of many valuable dyes, such as *mauve*, *magenta*, &c.

² The first four provinces were confederated by Act of Parliament in 1867, and Ottawa was made capital of the Union.

³ Ontario is called also "Upper, or West Canada."

⁴ Quebec is called also "Lower, or East Canada."

These two provinces are also called "Old Canada."

⁵ Toronto and Quebec are the seats of government of their respective provinces.

⁶ Prince Edward Island entered the Confederation in 1873.

⁷ Manitoba entered the Confederation in 1870.

⁸ British Columbia, formerly "New Caledonia" entered the Confederation in 1871.

Obs. **Ottawa**,¹ the metropolis of Canada, is on the river Ottawa. Its government buildings form a magnificent group, and the place is fast assuming the appearance of a well-built and commodious city. The town is much engaged in the lumber trade.

The chief ports and industrial centres are *Halifax* (chief naval station of Great Britain), *St. John* (commerce and shipbuilding), *Frederickton* (commerce), *Quebec* (chief port and fortress in the Dominion), *Montreal* (the commercial metropolis of Canada), *Kingston* (exports grain, and is an important military station), *Toronto* (exports wheat), and *Victoria* (a port on Vancouver's Island).

INDUSTRIES.—*Agriculture*, though improving, is still backward : but with even moderate cultivation the land yields good crops of cereals, fruit, and vegetables. *Manufactures* include shipbuilding, weaving, sugar-making, and tanning. A large number of the population is engaged in *lumbering, hunting, fishing, and mining*. *Commerce* is vigorous, and includes the export of bread-stuffs, and timber, and the import of iron, cottons, woollens, and other manufactured goods.

COMMUNICATIONS.—In her rivers, lakes, canals, and line of seaboard, Canada possesses a wonderful system of *water-carriage*. By the help of six canals the navigation of the St. Lawrence is made to extend to about 4000 m. An extensive *railway system* is at work and in course of construction ; and *telegraphic communication* is being rapidly established in every settlement of importance.

GOVERNMENT, RELIGION, AND EDUCATION.—The *government* is carried on by a *Governor-General*, who is appointed by the British Crown, *Lieutenant-Governors* of the several provinces, and a *Parliament* consisting of an Upper House, or Senate, containing 77 members, and a House of Commons of 206 members, who are chosen every 5 years. There is no *State religion*, and the people are about equally divided between Protestantism and Roman Catholicism, Protestants, however, being the most numerous. *Education* is State-aided, and is carefully organised in some of the provinces. Each township has common schools, and there are numerous upper schools and colleges, and a University for higher education.

ii. THE COLONY OF NEWFOUNDLAND.

PHYSICAL FACTS.—Newfoundland² is a large, irregularly shaped island, which lies on the N.E. side of the Gulf of St. Lawrence between the parallels 46° 30' and 51° 39' N. lat., and between the meridians 52° 15', and 59° 50' W. long. Its *area* is estimated at 40,200 sq. m. ; its greatest *length*, from N. to S., at 350 m., and its *mean breadth* at 130 m. The *coastline* is very irregular, and deeply indented by arms of the sea, many of which include excellent harbours. The chief *capess* are,

¹ **Ottawa** owes its rank as capital of the Dominion to its neutral position between the two Upper Provinces, and to its position with respect to the American frontier.

² The island seems to have been known very

early to the Icelandic and Norwegian navigators. John Sebastian Cabot re-discovered it in 1497. British subjects began to colonise it in 1578 : supreme control was granted to Great Britain by the treaty of Utrecht (1713).

Bauld, on the N.E.; Race, on the S.E.; and Ray, on the S.W. The chief *inlets* are Hare, White, Notre Dame, Bonavista, Trinity,¹ and Conception Bays, on the E.; St. Mary, Placentia, and Fortune Bays on the S.E.; the Bay of St. George, and the Bay of Islands, on the W. Numerous small *islands* skirt the coast, as Belle Isle, off the N.; Bell Island, Fogo, and Random, off the E.; Grand and Petite Miquelon,² off the S. The *surface* of the island is mountainous in the W., hilly in the centre, and low and marshy in the E. The principal *mountain ranges* are the *Blue Hills*, which run N.E. and S.W. near the E. side of the island; and the *Long Range* which skirts the W. coast from N. to S. The *climate* is foggy and severe, but not insalubrious; the *soil* is cold and sterile. The island is well watered by numerous rivers, lakes, and ponds. The chief *productions* are the Newfoundland dog, which attains his greatest perfection in this his native land, fish³ and seals. The *population*, estimated in 1874 at 161,500, consists of European colonists.

POLITICAL FACTS.—The settlers in Newfoundland dwell on and near the coasts,⁴ and are grouped in *electoral districts*, that are mostly named after the large bays about which they lie. The only important *town* is St. John's, the capital of the island, which lies on the S.E. coast, and possesses a safe and well-defended harbour: it is the centre of the foreign trade of the island, and has a *population* of 25,000. The chief *industry* of the island is fishing and seal hunting.

Obs. Labrador—the great inhospitable and sterile waste between the Gulf of St. Lawrence and Hudson Bay—is politically attached to Newfoundland. It produces nothing capable of sustaining life; but the seas which wash its desolate shores are amongst the most valuable fisheries in the world. The *population* consists of about 7,000 Esquimaux, and a few Moravian missionaries. The *chief towns* are Nain, and Hopedale, on the Atlantic coast.

II. THE REPUBLIC OF THE UNITED STATES.⁵

PHYSICAL GEOGRAPHY.

Latitude. Between 24° 30' and 49° N. *Longitude.* Between 66° 55' and 124° 40' W.
Area, including Alaska, and Indian Territory, 3,611,758 sq. m.

Obs. If water surface of lakes and rivers be included the whole area is nearly 4,000,000, sq. m.

The greatest *length*, from the coast of Maine to Cape Flattery, is 2,820 m. The greatest *breadth*, from the 29th parallel to Brownsville, on the Rio Grande, is 1,597 m.

POSITION AND BOUNDARIES.—The United States occupy the central part of N. America. They are bounded on the

N. by Canada; E. by the Atlantic; S. by the Gulf of Mexico, and the State of Mexico; and W. by the Pacific Ocean.

COASTS.—The *coast-line* is, generally speaking, remarkably even, being nowhere penetrated by any great arm of the ocean; still its

The Atlantic cables terminate at Heart's Content, a small cove of Trinity Bay.

These islands were ceded to the French by the Treaty of Paris (1763), and are now occupied by them.

The most extensive and valuable fishing grounds in the world are the banks of Newfoundland. They consist of immense sub-marine elevations covered with water, which varies in depth from 10 to 100 fathoms. Lying off the S.E. coast

of the island they extend over an area of more than 100,000 sq. m.

⁴ There is hardly a habitation 5 miles from the shore, except a small settlement of "Lumberers" at the head of Deer Lake on the river Humber.

⁵ The United States had their origin in the union of the 13 "original" states of the Atlantic coast in 1787, after the Revolutionary War against Great Britain (1783-6).

entire length amounts to 12,609 m. and embraces many excellent harbours. The chief coast features are the

1. **Capes** Cod, May, Charles, Henry, Hatteras, Lookout, Fear, and Florida, on the E.; Sable, Romano, St. Blas, on the S.; Conception, Mendocino, Blanco, Foulweather, and Flattery, on the W.
2. **Inlets**, viz., Boston or Massachusetts, Cape Cod, Delaware, Chesapeake, Raleigh, Onslow, and Long Bays, on the E.; the Gulf of Mexico, including the Bays of Appalachee, St. Andrew, Mobile, Orleans, Pensacola, Galveston, Matagorda, and Corpus Christi, on the S.; the Bay of San Francisco, on the W.

Obs. The Gulf of Mexico is a great inland sea which is connected with the Atlantic by the Florida Strait, and with the Caribbean Sea by the Yucatan Strait. It is 1,200 m. long, from E. to W., and has a mean breadth of 650 m., while its area amounts to 800,000 sq. m. This sea is almost free from shoals and islands, and it is in the pent-up waters of this Gulf, that the mighty Gulf Stream has its origin.

3. **Straits and Channels**, the chief of which are, Long Island Sound, between the mainland and Long Island; Florida Strait, between the Peninsula of Florida and the Bahama Islands; and Juan de Fuca Strait, between the mainland and Vancouver Island.

ISLANDS.—The chief islands off the coasts of the United States are Rhode Island, Long Island, Staten Island, and the Bermudas in the Atlantic; San Juan, Lopez, and Orcas, in the straits between the mainland and Vancouver Island.

Obs. 1. **Rhode Island** lies in Narraganset Bay, and gives its name to the smallest of the states. Its area is 37 sq. m.

Obs. 2. **Long Island**, opposite New York City, is 115 m. long, 20 m. broad, and has an area of 1,500 sq. m. The surface is flat and traversed throughout by a railway. The soil is fertile, and is highly cultivated. Brooklyn, the S. suburb of New York City, lies at its S.W. extremity.

Obs. 3. **Staten Island** lies a little S.W. of Long Island. Its area is 63 sq. m. Its iron mines and fisheries are valuable. It has a regular steam-packet communication with New York.

Obs. 4. **The Bermudas**, or **Somers Islands**, form a cluster of about 100 small islands, and lie about 580 m. E. of Cape Hatteras. Only some 15 or 16 of these are inhabited; and Main, the largest, is but 16 sq. m. in extent. The climate is genial and salubrious, and the productions include excellent arrowroot, and fine cedar wood. Hamilton, the capital, is on Main Island. They belong to Great Britain, and form an important naval station.

SURFACE.—The surface of the United States is mountainous in the W. and E. The interval between these regions is occupied by the vast plain of the Mississippi. A great belt of low and fertile plain also stretches between the E. mountain region and the Atlantic. The surface features to be noted are the

1. **Mountains**, the chief of which are connected with

(i.) *The Pacific Highlands*, viz., the

a. *Rocky or Oregon Mountains*, which run throughout the States from N. to S. (p. 193).

b. *Cascade Range* (p. 194).

c. *Californian Chain or Coast Range* (p. 194).

d. *Sierra Nevada*, which runs E. of the coast range, and parallel with it, and culminates in *Mt. Whitney* (14,898 ft.), the highest point in the United States.

e. *Wahsatch Mountains*, which lie on the S.E. side of the great basin in

State Utah, embrace a countless host of minor ranges, and culminate in *Peak Hayden* (13,500 ft.).

f. *Salmon River Mountains*, which lie on the N. edge of the great basin in the State of Idaho.

(ii.) *The Atlantic Highlands*, viz., the

Appalachian or Alleghany Mountain System (p. 194).

2. **Plains**, which form the most striking feature of the surface of the United States. From the E. base of the Pacific Highlands, to the W. base of the Appalachian Mountains, and from Canada on the N. to the Gulf of Mexico in the S., spreads a prairie country 600 m. wide, intersected in all directions by the grandest rivers, and embracing some of the most prolific regions upon earth. Also between the Atlantic and the Highland region there stretches another belt of lowland, 150 m. broad in its S. part, but narrowing gradually in its N. part, and terminating on the New England Coast. This level region is called the *Atlantic Plain*, and forms the rice grounds, and the cotton and sugar plantations of the States.

DRAINAGE.—The copious drainage of the United States is carried down three great plains which slope S.E. towards the Atlantic ; S. towards the Gulf of Mexico ; and S.W. towards the Pacific, respectively. The principal drainage agents are the

1. **Rivers**, the chief of which are those flowing down the—

a. *South Eastern Slope, into the Atlantic*, viz., the Connecticut, Hudson, Delaware, Susquehanna, Potomac, James River, Roanoke, Savannah, and St. John's.

b. *Southern Slope, into the Gulf of Mexico*, viz., The Alabama, Pearl River, Mississippi, Colorado, and Rio Grande del Norte.

c. *South Western Slope, into the Pacific Ocean*, viz., The Colorado, Sacramento, and Columbia River.

Obs. 1. **The Hudson River**,¹ one of the most magnificent streams in America, rises in the Adirondac Mountains, flows S., and after a course of 320 m. falls into the Atlantic by a large estuary, which forms the harbour of New York. It is navigable for large ships to Hudson (117 m.), and for steamers to Troy (166 m.). It passes by the towns Sandy Hill, Troy, Albany, Hudson, Catskill, Kingston, Newburgh, and New York.

Obs. 2. **The Alabama River** is formed by the union of the Talapoosa, and Coosa rivers : it flows S.S.W., and after a course of 600 m. falls into the Gulf of Mexico. Its chief tributary is the Tombigbee, which it receives on its right bank. From the confluence of the Tombigbee to the Gulf it is called the *Mobile River*. It is navigable for large steamers for 460 m. from the mouth. It passes the towns Montgomery, Selma, and Mobile.

Obs. 3. **The Mississippi** (see p. 196, Obs. 4) has for its affluents nearly all the large rivers in the States. The chief of these are the

a. *Nebraska or Platte River*, which rises in the North Park, flows N.E. and E., and after a course of 980 m. falls into the Missouri branch of the Mississippi. It is too shallow for extensive navigation.

b. *Arkansas*, which rises in Mt. Lincoln, flows E. and S.E. over a very sinuous course of 2,170 m., and enters the Mississippi on the right bank. It is navigable at all times for 600 m. and at certain seasons almost to the source. Its chief tributaries are the Red Fork of Arkansas, and the Canadian rivers on the right, and the Neosho river on the left.

c. *Red River*, which rises in the Staked Plains of Texas, flows E. and S.E. over a course of 1,200 m. and joins the Mississippi on the right. Its chief tributary is the Washita, which it receives on the left.

d. *Ohio*, which rises in the Pennsylvanian section of the Alleghany Mts., flows S.W. and after a course of 1,260 m. enters the Mississippi on the left. Its chief

¹ The first successful attempt to propel vessels by steam, was made upon the Hudson river by Robert Fulton in 1808.

tributaries are the Wabash on the right, the Kentucky, Cumberland, and Tennessee on the left. The Ohio and its tributaries furnish 5,000 m. of navigable waters.

(Obs. 4. *Rio Grande del Norte* (p. 196, Obs. 5).

2. **Lakes**, which are large and very important. The chief of them are Lakes *Superior* (p. 196, Obs. 1), *Michigan* (*ib.* Obs. 2), *Huron* (*ib.* Obs. 3), *Erie* (*ib.* Obs. 4), *Ontario* (*ib.* Obs. 5), *Champlain*, and *Wenham*, in the N.E.; and *Great Salt Lake* in the W.

(Obs. 1. Of the four great lakes, Superior, Huron, Erie, and Ontario, the S. parts only belong to the United States. Michigan, however, entirely belongs to them.

(Obs. 2. **Wenham Lake**, which lies in Massachusetts, is famous for the excellent ice which it yields, and which is exported to India, Great Britain, and France in very large quantities.

(Obs. 3. **The Great Salt Lake** lies in the Great Basin in the central division of the Pacific Highlands, and is a Continental Lake. Its area is 1,800 sq. m., and its waters intensely salt. It drains the small fresh water lake Utah through the Jordan river, but it has no known outlet.

CLIMATE.—The United States lie entirely within the N. Temperate Zone; but they exhibit almost every variety of climate. Florida and the regions on the Gulf of Mexico experience a semi-tropical climate. The climate of the Central and N. States corresponds, generally, to that of the countries of Central and S. Europe, but is more diversified. The swampy districts of the Mississippi and certain low lying regions on the coasts of the Gulf of Mexico and the Atlantic have a malarious and unwholesome climate; but that of the States in general is salubrious and favourable to longevity.

SOIL AND PRODUCTIONS.—In the N.E. the soil is poor and niggardly. From Long Island Southwards the Atlantic slope belongs to that rich alluvial country which extends along the shores of the Gulf of Mexico and up both sides of the Mississippi, and covers large portions of the valley of the Ohio. Considerable areas of the Pacific Highlands and their eastern slope are barren and stony wastes. The *Productions* generally are of the same kinds as those given in the table, p. 197,—wheat, cotton, and tobacco being the characteristic.

PEOPLE AND LANGUAGES.—The *population* of the United States and Alaska in 1870 was 38,925,598, and consisted mainly of

1. *Caucasians* or *Whites*, who are entirely immigrant and mostly of English and Irish origin.
2. *Negroes* or *Blacks*, who are of African extraction.
3. *Indians* or *Red Men*, who are indigenous to the soil but have now dwindled down to about 300,000, some of whom are semi-civilised.
4. *Asiatics* or *Yellow Men*, who are immigrants from China and Japan; these only number about 63,000, and are found chiefly in the gold districts of the W. The *Language* of the State, of literature, and of the great bulk of the people, is English.

(Obs. **Alaska**, formerly called "Russian America," was purchased from Russia in 1867.

It lies at the N. W. corner of the continent, and is bounded on the N. by the Arctic Ocean; E. by British N. America; S. by the Pacific Ocean; and W. by Behring Sea, and Behring Strait. The area is estimated at 577,390 sq. m. The coasts on the W. and S. are deeply penetrated with arms of the sea, and thickly fringed with islands. Of the *inlets*, the chief are Behring Bay, and Cook Sound, on the S.; and Bristol Bay, Norton Sound, and Kotzebue Sound, on the W.

The chief *capes* are Newenham, Romanzov, Prince of Wales, Hope, Lisburne, and Icy Capes on the W.; and Point Barrow, on the N. The principal *islands* are Prince of Wales Island, Sitka, and Kodiak, off the S. coast. The Aleutian Isles, and Nunivak off the S. W. coast; and St. Lawrence off the W. coast.

Much of the *surface* of Alaska is still unexplored, but the S., S.E., and S.W. parts are known to be mountainous and volcanic; while as much of the N. portion as is known, presents a broken, hilly, and elevated expanse. The principal *Mountains* are, *The Coast*, or *St. Elias Range*, which extends along the coast from California to the Peninsula of Alaska, and culminates in *Mt. St. Elias* (17,900 ft.); it includes numerous very high peaks and several volcanoes. The great *river* is the Yukon or Kwichpak, which rises in British territory and after a course of 2000 m., empties itself into Behring Sea. Its chief *tributary* is the *Porcupine* on the right bank. The *climate*, which is naturally extreme, is much tempered by the large surrounding bodies of water and by the warm current which sets in thitherwards from Japan. Still, snow from 8 to 12 feet deep, lies on the ground from November to April. The short summers are intensely hot, and bring to swift maturity a rapidly developed, and often luxuriant, vegetation. There are extensive tracts of rich alluvial soil. Excellent timber abounds; fur-bearing animals are still plentiful; and fish swarm on the coasts and in the rivers. The *population* is 70,461, of whom 483 are Russians, 1421 Creoles, and the remainder natives of various tribes.

POLITICAL GEOGRAPHY.

POLITICAL DIVISIONS.—The United States consist of thirty-eight States, one District, and eight Territories.

Obs. 1. The "Original Thirteen" form the nucleus of this vast organisation. They occupy the Atlantic Coast, and still constitute the most populous and influential part of the Union. They were English colonies, but obtained their independence in 1783, united themselves under one constitution, and inaugurated the Government of "The United States of America." They are

- | | | |
|-------------------|------------------|---------------------|
| 1. New Hampshire. | 6. Pennsylvania. | 10. Virginia. |
| 2. Massachusetts. | 7. New Jersey. | 11. North Carolina. |
| 3. Rhode Island. | 8. Delaware. | 12. South Carolina. |
| 4. Connecticut. | 9. Maryland. | 13. Georgia. |
| 5. New York. | | |

Obs. 2. The "Territories" are incipient States, controlled by, but not yet incorporated with the Union, because they have not sufficient population.

For convenience of reference the States are usually thrown into seven groups,¹ as in the following table :—

¹ Such groupings are, of course, more or less arbitrary. The States are often divided into "Northern," and "Southern," or "Free" and "Slave" States. Those of the Atlantic are called

"Atlantic States;" those in the Valley of the Mississippi, "Valley States." We hear also of "Cotton States," "Lake States," "Gulf States," &c.

STATES.	CHIEF TOWNS.	STATES AND TERRITORIES.	CHIEF TOWNS.
I. 6 NEW ENGLAND OR N.E. STATES.		V. 11 CENTRAL STATES.	
1. Maine	Augusta, Portland.	25. Michigan	Lansing, Detroit.
2. New Hampshire	Concord, Manchester.	26. Ohio	Columbus, Cincinnati.
3. Vermont	Montpelier, Burlington.	27. Indiana	{ Indianapolis, Evansville.
4. Massachusetts ¹	Boston, Worcester.	28. Illinois	Springfield, Chicago.
5. Rhode Island ¹ ..	{ Providence. Newport.	29. Wisconsin	Madison, Milwaukee.
6. Connecticut ¹ ..	Hartford, New Haven.	30. Minnesota	St. Paul, Minneapolis.
II. 6 MIDDLE STATES.		31. Iowa	Des Moines, Dubuque.
7. New York ² ..	{ Albany, New York, Brooklyn, Buffalo.	32. Nebraska	Lincoln, Omaha.
8. Pennsylvania ³ ..	{ Harrisburg, Philadel- phia ⁴ .	33. Colorado	Denver.
9. New Jersey ⁵ ..	Trenton, Newark.	34. Missouri	Jefferson City, St. Louis.
10. Delaware ⁶	Dover, Wilmington.	35. Kansas	Topeka, Leavenworth.
11. Maryland ⁷	Annapolis, Baltimore. ⁸	VI. 3 PACIFIC STATES.	
12. W. Virginia ..	Wheeling. {town.	36. Oregon	Salem, Portland.
13. Columbia (Dist.) ⁹	Washington, George-	37. California ¹⁰ ..	{ Sacramento, San Fran- cisco.
III. 5 SOUTH-EASTERN STATES.		38. Nevada	Carson City, Virginia.
13. Virginia ¹⁰	Richmond, Norfolk.	VII. 8 TERRITORIES.	
14. N. Carolina ¹¹ ..	Raleigh, Wilmington.	1. Dakota	Yankton.
15. S. Carolina	Columbia, Charleston.	2. Wyoming	Cheyenne.
16. Georgia ¹² ...	Atlanta, Savannah.	3. Montana	Helena.
17. Florida ¹³	{ Tallahassee, Jackson- ville.	4. Washington ..	Olympia.
IV. 7 SOUTHERN STATES.		5. Idaho	Boise City.
18. Kentucky ...	Frankfort, Louisville.	6. Utah ¹⁷	Salt Lake City, Ogden.
19. Tennessee	Nashville, Memphis.	7. Arizona	Tucson.
20. Alabama	Montgomery, Mobile.	8. New Mexico ..	Santa Fé.
21. Mississippi	Jackson, Vicksburg.	Ohs. Alaska, Columbia, and the Indian Territory, are not included in the Official List of the "States" because they have no Territorial Government.	
22. Louisiana ¹⁴ ...	New Orleans.		
23. Arkansas	Little Rock.		
24. Texas ¹⁵	Austin, Galveston.		

¹ Massachusetts, Rhode Island, and Connecticut, are the chief manufacturing States. They turn out nearly half the cotton, woollen, and leather goods produced by the States.

² New York was so named after the Duke of York and Albany, brother of Charles II.

³ So called from William Penn, the Quaker.

⁴ The Declaration of Independence was made here 4th July, 1776.

⁵ Was so named after Lord Jersey.

⁶ So named after Lord De La Warr.

⁷ After Henrietta Maria, Queen of Charles I.

⁸ Baltimore is styled "The Monumental City," in allusion to its statue of Washington (212 feet high), and "The Battle Monument," in memory of the defenders of the city (1814).

⁹ Columbia District is about 60 sq. m. in extent, and has been formed out of territory ceded to the Government by the States of Virginia and Maryland. Its name is taken from Columbus, the discoverer.

¹⁰ The oldest and largest of the "original thirteen" States. It is often called "The Old Dominion," and many of the most illustrious Americans were Virginians, e.g. Washington, Madison, Jefferson, &c.

¹¹ The Carolinas were originally named after Charles IX. of France; afterwards from Charles

I. and Charles II. of England. The first English colony was founded in North Carolina by Sir Walter Raleigh in 1585. The Colony, which was settled on Roanoke Island, was given up the following year.

¹² Georgia was so called after George II., who granted the charter of the Colony in 1732.

¹³ Was purchased from Spain in 1819, and admitted into the Union in 1845.

¹⁴ So called after Louis XVI. It was purchased from France in 1803, when it included Arkansas, Mississippi, and other Western States. It was admitted into the Union in 1812.

¹⁵ Texas was originally included in Mexico. It became one of the United States in 1845 by annexation. It is the largest State in the Union.

¹⁶ Purchased from Mexico in 1848, and incorporated with the Union in 1850. The agricultural capacities of California are as valuable as its mineral resources. It produces the most excellent wheat, tea, coffee, and the most delicious fruits and vegetables; and its forests contain the most gigantic trees known. The Yosemite Waterfalls of the Merced River, which are "half a mile high," are the loftiest in the world.

¹⁷ Organised in 1850. The white population are Mormons, or "Latter Day Saints."

NOTES ON THE TOWN. The most populous towns are *New York* (942,292), *Philadelphia* (674,022), *Brooklyn* (396,099), *St. Louis* (310,864), *Chicago* (498,977), *Baltimore* (267,354), *Boston* (250,526), *Cincinnati* (216,239), *New Orleans* (191,418), *San Francisco* (149,473), *Buffalo* (117,714), *Washington* (109,199), *Newark* (105,059), and *Louisville* (100,753).

Obs. 1. *Washington*, on the Potomac, is the Federal capital of the States and the seat of Government. It owes its importance to the presence of the Government, having neither manufactures nor commerce. It is celebrated for its magnificent public buildings, the chief of which is the Capitol.

Obs. 2. *New York*, the largest and most important city in the New World lies at the head of New York Bay, on Manhattan Island. It is the *trade emporium* of the whole of the United States, and is called the "Empire City," a distinction which it owes to its maritime position, its river Hudson, which connects it with the ports on the great lakes, and to its excellent harbour.

Obs. 3. *Philadelphia*, which is situated on the river Delaware and near the head of Delaware Bay, is renowned for its learned and charitable institutions, and for its manufactures. It was formerly the capital of the United States.

The chief **Naval Ports** are, *Portsmouth*, *Charleston*, *Brooklyn*, *Philadelphia*, *League Island*, *New London*, and *Washington*.

The chief **Commercial Ports** are on the

1. Atlantic, *Boston*, *New York* with *Brooklyn*, *Philadelphia*, *Baltimore*, *Charleston*, and *Savannah*.
2. Gulf of Mexico, *New Orleans*, *Mobile*, and *Galveston*.
3. Pacific, *San Francisco*.
4. Lakes, *Milwaukee*, and *Chicago*, on Michigan; *Detroit*, *Toledo*, and *Buffalo* on Erie; and *Oswego*, on Ontario.

The chief **Manufacturing Towns** are—for cotton goods, *Lowell* (the American "Manchester"), *Nashua*, *Manchester*, *Smithfield*, *North Providence*, and *Norwich*; for hardware, *Pittsburg* (the American "Birmingham"), *Troy*, *Harrisburg*, and *Reading*; for jewelry, *Providence*, and *Newark*.

The chief **Mining Centres** are *Peoria*, *Galena*, *Dubuque*, *Devonport*, *Carson*, *Virginia*, and *Marysville*.

Obs. Many of the towns of the States bear descriptive titles—e.g., *New York* is called "Empire City;" *Cincinnati*, "the Queen of the West;" *Washington*, "the City of magnificent distances;" *Cleveland*, "the Forest City of the North;" *Savannah*, "the Forest City of the South;" *Newhaven*, "the Elm City;" *Milwaukee*, "the Cream City;" *Baltimore*, "the Monumental City," &c.

INDUSTRIES.—The principal branch of American industry is *Agriculture*. In some of the states grazing is very extensively followed. *Manufactures* are mostly carried on in the N.E. states, the principal classes of goods manufactured being machinery, flour and meal, cotton and woollen fabrics, and leather. *Mining* is important, and annually becomes more so. *Lumbering* is a most active industry, and a source of great wealth to the Republic. The *commerce* is vast, and includes the *export* of wheat, flour, cotton, tobacco, pickled pork, hams, butter, and cheese; and the *import* of manufactured goods, chiefly from Great Britain.

COMMUNICATIONS.—The sea and lake frontage of the United States is of enormous extent. *Navigable Rivers* connected by canals intersect the country in all directions. The *Railways* open for traffic in January, 1878, had an aggregate length of 79,208 m. At the same

date there were 95,500 m. of telegraphic lines open. Two submarine cables connect N. America with England, and one with France.

GOVERNMENT, RELIGION, AND EDUCATION.—The States constitute a "Federal Republic," and the Government is Democratic. Each state has a constitution for the management of its own internal affairs. The *Religion* is Christianity, the mass of the people being Protestants. Most of the French and Irish settlers are Roman Catholics. A good *Education* is brought within reach of the poorest classes by a system of municipal and state-aided schools. In addition to these public free-schools there are, in the large towns and cities, academies, colleges, and schools for technical and professional education.

III. THE REPUBLIC OF MEXICO.

PHYSICAL FACTS.

The *area* of Mexico is 740,637 sq. m.; its greatest *length* from N.W. to S.E. is about 1,800 m., its *breadth* ranges from 137 m. to 1250 m. It lies between the parallels 15° 20' and 32° 30' N. lat., and between the meridians 86° 45' and 117° 30' W. long., and is bounded on the N. by the United States; on the E. by the Gulf of Mexico, the Caribbean Sea, and Central America; on the S. and W. by the Pacific Ocean, and the Gulf of California. The *coasts* have been computed at nearly 6000 m., but they comprise no important harbours. The chief *inlets* are the Gulfs of Vera Cruz, and Campeche, on the E., the Gulf of Tehuantepec, on the S., and the Gulf of California, on the N.W. The principal *capes* are Catoche, on the E.; Corrientes, Lucas, and St. Eugenio on the W.

The *surface* of this remarkable country is much varied. Its general *altitude* ranges from 6,500 ft. to 8,000 ft. above the level of the sea. It is traversed by four principal *mountain ranges*, viz., 1. The E. Cordilleras or Sierra Guadalupe, in the E.; 2. Sierra Madre, in the centre; 3. Sierra Sonora, on the E. side of the Gulf of California; and 4. The Californian Range, on the W. side of that gulf. The colossal summits, *Popocatepetl*, *Orizaba*, *Colima*, and *Tuxtla*, belong to the great volcanic belt in which these ranges terminate. The *general plateau of Mexico* is divided into sub-plateaux by the mountain ranges, the chief of which are the plateau of 1. *Chihuahua* or *New Spain*, in the N.; 2. *Sonora*, in the N.W.; and 3. *Anahuac*, in the S. The chief *rivers* are the Rio Grand del Norte (see p. 196, *Obs.* 5), the Rio Grande de Santiago, which flows into the Pacific; and the Rio Colorado. Of the many *lakes* in Mexico the chief are *Chapala*, which is drained by the Rio Grande de Santiago, *Cayman*, in N. Mexico, and *Tezcuco*, near the capital. The Mexicans divide their country into 3 *climatic zones*, viz., 1. The cold region, which embraces the general tableland, and has a mean annual temperature of 64° at Mexico city; 2. The *temperate region*, which includes the slopes of the tableland, and has a mean annual temperature of 68° or 70°. 3. The torrid region, which lies on the coast and has a mean annual temperature of 77°. The *soil* is very variable in quality; the best is found in the torrid region; but that which is most cultivated by the natives belongs to the temperate region. Of the *animal productions*, the most valuable is the cochineal insect. The turkey is native to Mexico. The *vegetable productions* comprise excellent wheat and maize; the most delicious *fruits*; *spices*, such as vanilla, pimento, capsicum or Spanish pepper, &c.; the mague or pulque plant (from the juice of which the Mexicans make their national beverage "Pulque"), which

is peculiar to Mexico; *fibrous plants*, such as cotton, hemp, and Ramie; *dye-stuffs, medicines, gums*, such as indigo, sarsaparilla, jalap, liquorice, and india-rubber; and *sundries*, such as sugar, cocoa, tobacco, and coffee. The *forests* yield the famous Mexican oak, ebony, rosewood, mahogany, &c. The *minerals* comprise silver, gold, quicksilver, tin, copper, lead, and zinc; and sulphur abounds in the vicinity of Popocatepetl. The *population* is 9,389,461, and consists of Indians, who form half the people and speak the Aztec language; mixed races; and whites. The *Language* of the country is Spanish.

POLITICAL GEOGRAPHY.

For administrative purposes, Mexico is divided into 27 States, 1 Federal district, and 1 Territory. The *capital* is *Mexico*, which has a *population* of 230,000. *Puebla*, the chief manufacturing trading town, is famous for its cathedral; *Matamoras*, near the mouth of the Rio del Norte; *Vera Cruz*, on the gulf; and *Acapulco*, on the Pacific, are the chief *sea-ports* of Mexico.

The most important *industries* are *gariculture*, which is pursued by seven-eighths of the population; *mining*, which is a source of great wealth, silver and gold existing in large quantities; and *commerce*, which includes the *export* of sugar, coffee, drugs, cotton, mahogany, metals, and dyes; and the *import* of machinery, fire-arms, hardware, and earthenware.

The *communications* are not good; most of the *rivers* are unfit for navigation; the *high roads* are excessively bad and not adapted for wheeled vehicles. The entire length of *railway*, in 1878, was 480 m., and about 100 m. of *tramways*; there were in operation at the same time nearly 7000 m. of *telegraphic* lines.

The *constitution* of Mexico is a *Federal Republic*. *Education* is receiving much attention, though it is still in a backward condition.

IV. CENTRAL AMERICA.

PHYSICAL FACTS.

The States of Central America lie between the parallels 8° and $18^{\circ} 30'$ N., and between the meridians $82^{\circ} 30'$ and $92^{\circ} 30'$ W., and have an *area* of 174,820 sq. m. They have Mexico on the N., the Caribbean Sea, and Isthmus of Panama on the E., and the Pacific Ocean on the S.W. The coast embraces some excellent harbours. The chief *capes* are Gracias a Dios on the E.; Mata Palo, Blanco, and Gordo, on the S.W.; the *inlets*, the Bay of Honduras on the E., and the Bays of Dulce, Nicoya, and Fonseca, on the S.W. A number of small islands lie about the Caribbean coasts, the chief of which are the Bay Islands. The *surface* is a great tableland, of different elevations, traversed by lofty mountain ranges and crowned with isolated volcanic peaks of colossal proportions. For the *mountain systems* see p. 194. The general tableland is divided by natural depressions into three great masses, viz., the plateaux of *Guatemala*, which has a general elevation of 6,000 ft.; *Honduras*, 4,000 ft.; and *Costa Rica*, 2,000 ft.

Obs. Volcanic Agency appears to have expended its greatest force in this region; for central America includes more volcanoes, active and extinct, in proportion to its area, than any other part of the world. Of 29 distinct summits 18 are in greater or less activity. The loftiest peaks, *Agua, Atitlan*, and *Fuego* are in the Guatemala group.

Central America is most copiously watered, but the *rivers* are very rapid. The chief of them are the Motagua, Wanks, Escondido, and San Juan, all of which flow from W. to E. and fall into the Caribbean Sea. The chief *lakes* are Nicaragua, which is 120 m. long, and its dependent lake Leon. The *climate* is pleasant and salubrious on the highlands, but hot, moist, and pesti-

lential, in the valleys and low grounds. The chief productions are cochineal, maize, wheat, and rice; tropical fruits, spices, drugs, fibrous plants, timber, gold, silver, and precious stones. The population is 2,509,900, of whom more than 1,000,000 are Indians, who speak their own dialects. There are upwards of 1,000,000 of mixed races, 150,000 whites, and 30,000 negroes.

POLITICAL FACTS.—The States of Central America, together with their capitals, chief towns, and other particulars, are given in the following table:—

STATES.	CAPITALS.	OTHER LARGE TOWNS.	PRINCIPAL INDUSTRIES.
I. British Honduras ¹	Belize	Manati	{ Agriculture, commerce, timber-cutting, fishing.
II. Guatemala ..	Guatemala. ²	Istapa, and St. Thomas....	{ Agriculture, commerce, export of cochineal, indigo, and mahogany; and manufactures.
III. San Salvador.	San Sal- vador. }	{ Acajutla, La Libertad, La Union	{ Agriculture, commerce, export of indigo, ores, drugs, rice, and sugar; manufactures, and mining.
IV. Honduras....	Teguc- galpa. }	{ Omoa, ³ Truxillo, Puerto Caballos.....	{ Agriculture, commerce, export of bullion, cattle, & mahogany; & mining.
V. Nicaragua.....	Managua.	{ Leon, Realejo, San Juan, Grenada	{ Agriculture, commerce, export of cattle and ornamental woods.
VI. Costa Rica ..	San José..	{ Alajuela, Puntas Arenas, and Culebra	{ Agriculture, commerce, export of coffee, indigo, &c.; mining.

The Largest Towns are *Guatemala* (pop. 45,000), *San Salvador* (16,000), and *San José* (12,000). The principal ports are *Istapa*, *St. Thomas*, *Acajutla*, *La Libertad*, *La Union*, *Omoa*, *Truxillo*, *Realejo*, *San Juan*, *Puntas Arenas*, and *Culebra*. The chief industries are agriculture and cattle-rearing; mining, manufactures, coarse woollen and cotton stuffs, and commerce, which includes the export of India-rubber, bullion, coffee, indigo, cochineal, drugs, and timber; and the import of cotton, linen, and silk goods, glass, spirits, and earthenware. The communications are insufficient, and deplorably bad: few of the rivers are navigable. Attention, however, is now being paid to the formation of railways and canals for inter-oceanic business. With respect to the Government, all the states, save British Honduras, are Independent Republics, and have their own constitutions and their own governments; most of the people are *Roman Catholics*, and Education is by no means general.

¹ British Honduras was attached to Jamaica after being yielded to England by Spain in 1763, but since 1863 it has been an independent colony.

² New Guatemala was founded in 1776, after

Old Guatemala, some 20 m. further S.W., had been destroyed by an earthquake in 1773.

³ Omoa is said to be the hottest place in the New World.

V. THE WEST INDIES,¹ OR THE ANTILLES² ISLANDS.

The West Indies consist of a great chain of islands, which stretches from the peninsulas of Yucatan and Florida to the coast of Venezuela in S. America. They belong almost entirely to various European powers, have a total area of more than 90,000 sq. m., and a population of 4,163,291. They are usually classed in three groups, viz., 1. *The Bahamas*; 2. *The Greater Antilles*; 3. *The Lesser Antilles*.

i. THE BAHAMA OR LUCAYOS ISLANDS.

These are a large group of some 500 islands, about twenty of which are inhabited. They belong to Great Britain, and have a total area of 5,390 sq. m. They produce maize, sugar, fruits, cotton, turtle, sponges, salt, &c. The principal islands are Bahama, Abaco, Andros, New Providence, Eleuthera, St. Salvador—the first island on which Columbus landed in 1492—Long Island, Acklin, Inagua, Caicos,³ and Turks.⁴ The population is 39,162, and Nassau, on New Providence Island, is the capital.

ii. THE GREATER ANTILLES.

CHIEF ISLANDS.	AREA IN SQ. MILES.	POPULATION.	CHIEF TOWNS.	BELONGS TO	CHIEF PRODUCTS.
1. Cuba	45,870	1,394,516	Havannah ⁴	Spain	{ Sugar, coffee, cotton, tobacco, copper.
2. Jamaica	4,193	506,154	Kingston	Great Britain }	{ Sugar, rum, coffee, cotton, hardware.
3. Hayti and San Domingo }	29,820	800,000	{ Port au Prince, San Domingo.. }	Independent }	{ Logwood, mahogany, cotton, coffee.
4. Porto Rico ..	3,595	615,600	San Juan	Spain	{ Sugar, coffee, rum, tobacco.

Obs. 1. *The Greater Antilles* stretch from the E. shores of Porto Rico to the Yucatan Channel, or through 19 degrees of longitude, viz., from 66° to 85° W.

Obs. 2. *Cuba* is called "The Queen of the Antilles," and is the largest of the W. Indian islands. It is 700 m. long and 130 m. broad. Its surface is mountainous, and culminates in *Mt. Cobre* (7,200 ft.), which lies in the S.E. of the island, and yields about a sixth part of the marketable copper in the world.

Obs. 3. *Jamaica* ("land of wood and water"), the most important of the British possessions in the W. Indies, is 140 m. long and 40 m. broad. Its chief mountains are the *Blue Range*, which culminates in the *Western Peak* (7,333 ft.). Its only navi-

¹ The name "West Indies" was given to these islands by Columbus on his discovering them in 1492, under the mistaken idea that they formed part of Asia.

² The *Antilles* take their name from an imaginary island of *Antilia*, which was said to lie in the Atlantic, W. of the Azores. It was thought that this was the island which Columbus had dis-

covered.

³ The *Turks and Caicos Islands* were separated from the other *Bahamas* in 1848, and formed into a distinct Government under the Government-in-Chief of the Governor of Jamaica.

⁴ *Havannah* has a population of 230,000, and may be termed the metropolis of the West Indies.

gable river is the *Black River*. The island is divided into three *counties*, Middlesex, Surrey, and Cornwall. It possesses several good *ports*, the chief of which are Kingston, Falmouth, and Montego Bay.

Obs. 4. *Hayti* and *San Domingo* is the most fertile of the W. Indian islands; it proclaimed its independence in 1801. The name *Hayti* belongs only to the W. part of the island, while the name *San Domingo* is confined to the Eastern part.

iii. THE LESSER ANTILLES OR CARIBBEE ISLANDS.

These fall naturally into two chains, which are called "the Windward Isles," and "the Leeward,"¹ or "Venezuelian Islands."

Of the *Windward Chain* the chief islands are the *Virgin Isles*² (Britain, Denmark, and Spain), *Anguilla* (Britain), *St. Martin* (France, and Holland), *Barbuda* (Britain), *St. Kitts* (Britain), *Nevis* (Britain), *Antigua* (Britain), *Montserrat* (Britain), *Guadeloupe* (France), *Marie Galante* (France), *Dominica* (Britain), *Martinique* (France), *St. Lucia* (Britain), *St. Vincent* (Britain), *Barbados* (Britain), and *Grenada* (Britain).

Obs. The chief *products* common to all these islands are sugar, coffee, fine fruits, spices, cotton, tobacco, and dyes.

Of the *Leeward* or *Venezuelian Islands* the most important are *Tobago* (British), *Trinidad* (British), *Margarita* (Venezuela), *Tortuga* (Venezuela), *Buen Ayre* (Holland), *Curaçao* (Holland), and *Oruba* (Holland).

Obs. The chief *products* of this group are sugar, coffee, cotton, and maize.

II. SOUTH AMERICA.

PHYSICAL GEOGRAPHY.

Latitude, between 12° 25' N. and 60° S. *Longitude*, between 34° 50' and 83° W.

Obs. The *extreme points* are Cape Gallinas, on the N.; Balea Point, on the E.; Cape Horn, on the S.; and Point Burica, on the W.

The estimated area is 6,851,808 sq. m.

Obs. The greatest *length* from N. to S. is 4,550 m.; the greatest *breadth*, 3,200 m.

POSITION AND BOUNDARIES.—South America forms the S. part of the New World. It is bounded on the

N. by the Atlantic Ocean, and the Caribbean Sea; E. by the Atlantic; S. by the Atlantic and Pacific Oceans; W. by the Pacific.

COASTS.—The coasts of S. America are singularly even and unbroken, especially on the W. side. The *sea-board* is comparatively small, amounting altogether only to 16,012 m., or 1 m. to every 434 sq. m. of *Area*. This defect, however, is to some extent compensated

¹ The term *Leeward* is also applied to the *Greater Antilles*. It was the Spaniards who gave the name to the Venezuelan chain. The "*Leeward Islands*" is also the designation of the British Federal Colony formed in 1871, and consisting of the Colonies of Antigua, Montserrat,

St. Kitts, Nevis, Dominica, and the Virgin Islands.

² The *Virgin Isles* comprise Culebra, Crab Islands, St. Thomas, St. John, Tortola, Anegada, Virgin, Gorda and Santa Croix.

for by large rivers, which are navigable throughout the greater part of their courses. The main coast features are the

1. **Capes**, viz., Gallinas, Codera, Paria, Orange, and Norte, on the N.; Capes Roque, Balea, S. Thomé, Frio, Antonio, Corrientes, Three Points, Blanco, Virgins, and San Diego, on the E.; Cape Horn, on the S.; and Tres Montes, Paríña, S. Lorenzo, and S. Francisco, on the W.

Obs. Cape Horn (or *Hoorn*, the birthplace of Schouten, the Dutchman, who discovered the Cape) is on the most S. island of the Fuegian Archipelago. The most S. point on the mainland is *Cape Forward*.

2. **Inlets**, viz., the Gulfs of Darien, Venezuela, including the Sea of Maracaybo, and Paria, and the estuaries of the Orinoco, Amazon or Marañon, and Para, on the N.; the Bays of Todos Santos, Formosa, the estuary of the Rio de la Plata, and the Gulfs of Mathias, and St. George, on the E.; the Gulfs of Peñas, Guayaquil, Choco, and Panama, on the W.
3. **Straits**, viz., the Strait of the Serpent, between the mainland and Trinidad on the N., and Strait of Magellan, which runs between the mainland and the islands Tierra del Fuego, Clarence, Inez, and Desolation, and connects the Atlantic and Pacific Oceans.

ISLANDS.—The chief of the numerous islands about S. America are the Falkland Isles, Staten, S. Georgia, S. Shetlands,¹ off the S.E. coast; the Fuegian Archipelago, off the S. coast; Queen Adelaide, Hanover, Wellington, the Chonos Archipelago, Chiloe,² Juan Fernandez, St. Felix Islands, Chinchas³ Islands, Lobos³ Islands, Galapagos Islands, and Cocos, off the W. coast.

Obs. 1. The Falkland Islands are a large archipelago, which consists of E. Falkland, W. Falkland, and about 100 small islands with an aggregate area of 6,500 sq. m. They lie in the S. Atlantic, opposite the Strait of Magellan, are treeless and have a most desolate appearance. The highest point, *Mount Adam*, is 2,815 ft. above the sea. The *climate* is healthy, though there is much wind and fog. The principal *productions* are wild horses, cattle, pigs, rabbits, and wild duck; the coasts swarm with seals, penguin, and fish. The Falkland Islands form a British colony, having been taken possession of by the British Government in 1833 for the protection of the whale fishery. Davis discovered these islands in 1592.

Obs. 2. Tierra del Fuego ("the land of fire") is an archipelago consisting of five large and several small islands, at the S. extremity of S. America. The W. part of the island is mountainous, many of its summits being 4,000 feet high, and embraces numerous volcanoes. The *climate* is abominable, being characterised by storms, drenching rains, and thick mists. The chief *products* are timber, slate, and hornblende. Fishing and hunting are much followed by the natives, who belong to about the lowest type of human beings.

Obs. 3. Juan Fernandez or *Mas-a-Tierra*, is a dependency of Chili, and lies 400 m. from the W. coast. The island produces figs, grapes, and valuable timber. It is interesting as the scene of the tale of *Robinson Crusoe*.

Obs. 5. The Galapagos ("land tortoises") are a group of islands in the Pacific on and about the equator, and 700 m. W. of the coast, consisting of 10 large and several small islands of volcanic origin, with an aggregate area of nearly 3,000 sq. m. *Albemarle*, the largest island, attains in places elevations of 4,000 ft. The islands are frequented by very large tortoises, and by various kinds of reptiles and birds, which are peculiar to this region. They are *politically* attached to Ecuador.

¹ Or New South Shetland, an Archipelago, and portion of mainland in the Pacific, 800 m. S. of Tierra del Fuego. The chief islands are Livingstone, Cornwallis, King George, Clarence, and Elephant.

² Chiloe, with a number of the small islets in its vicinity, forms a Province of Chili. About 30

of the islands are inhabited by a pop. of 64,538, and some of them are well cultivated. They are densely wooded, and famous for the enormous coal deposits which they contain. The chief town is San Carlos.

³ The Chinchas and Lobos Islands are famous for their rich deposits of Guano.

SURFACE.—Three-fourths of the surface of S. America consists of *plains*, the remaining fourth of mountains and table-lands. The chief

1. **Mountains**, belong to the three great systems named in the following table:—

MOUNTAIN SYSTEMS.	DIRECTION AND POSITION.	CHIEF SUMMITS.	
		NAMES OF.	HEIGHT IN FEET.
1. The Andes System	{ Running from N. to S., near to and parallel with the coast... } { Stretching nearly E. and W., midway between the equator and the ocean... } { Running, very irregularly, nearly E. and W..... }	Aconcagua	22,296
2. The Parime System		Maravaca	10,496
3. The Brazilian System		Itatiaiossu	8,895

Obs. 1. The **Andes** traverse Patagonia as a single narrow chain, enter Chili near the 44th parallel S., and continue rising higher and higher, until they reach 31° 42' S., where they culminate in peak *Aconcagua*. Reaching the frontiers of Bolivia, the chain, which has been thus far meridional, diverges towards the N.W., and at the same time splits into two ranges which enclose the Plateau of Desaguadero (13,000 ft.). On this plateau is lake Titicaca, the largest sheet of fresh water in S. America. The double chain, of which the peaks *Sahama* (22,000 ft.), *Sorata* (21,286 ft.), and *Illimani* (21,224 ft.) are the culminating points, completely encloses this lofty valley. Near the silver mines of Pasco the plateau sends up a third chain, which runs parallel with the other two; and with this triple crest, but with diminished height, the Andes reach the frontiers of Ecuador. Here the system returns to its double form, but with augmented grandeur and magnificence. Twenty volcanoes, of which the chief are *Chimborazo* (21,424 ft.), and *Cotopaxi*, shoot up from the splendid mountain group which encloses the famous plateau of Quito. A little N. of the Equator the double range unites into one again; but immediately afterwards, splitting up into three separate chains, it spreads out into fan-shaped ramifications. The E. chain terminates at the Caracas Mts.; the central chain, which contains the volcano *Tolima* (18,020 ft.), continues its N. course between the Magdalena and the Cauca rivers to the Caribbean shores; while the W. chain between the Cauca and the sea runs N. into the Isthmus of Darien.

From the Strait of Magellan, where the Andes commence, to the Isthmus of Darien, the system, with its curves, presents a development of 4,500 m. Its greatest breadth is from 160 to 200 m.

The different parts of the Andes are distinguished by the names of the countries through which they pass, as the *Patagonian Andes*, which are very little known; the *Chilian and Argentine Andes*, between the parallels 44° and 23° S. lat.; the *Bolivian Andes*, which stretch to 17° 30' S.; the *Peruvian Andes*, which run to 8° 30' S.; the *Andes of Ecuador*, which extend to 1° N.; and the *Andes of Venezuela and Colombia*, which extend, in their E. ramifications, to 10° N.

Obs. 2. The **Parime System**, or "Codillera of the *Ostaraets of Orinoco*," which lies within the bend of the river Orinoco, and between the N. plain of the Amazon and the ocean, consists of a succession of chains, more or less parallel to the coast, some 1,500 m. long, and from 200 to 400 m. broad, of which the most striking are the *Sierra Juruquaca*, *Sierra Pacaraima*, *Sierra Acaray*, and the *Sierra Tumucumaque*. The System has a mean elevation of 4,000 ft., and is covered with superb forests.

Obs. 3. The **Brazilian System** covers the E. and central parts of the state, and forms an irregular plateau, serried with sharp ridges running generally N. and S. The chief ranges are the *Serra do Mar*, or *Maritima*, which runs parallel, more or less, with the S.E. coast; the *Serra Mantiqueira*, which, as it trends N., is called the *Serra do Espinhaço* (*Spinal Range*), and the *Central Range*, the most important of the Brazilian Mts.; its culminating point, *Itatiaiossu* or *Itatiaia*, is also the cul-

minating point of Brazil; and the *Serra dos Vententes* or *Western Range*, the most extensive, but the lowest of the three ranges. These ranges all lie in E. Brazil, and have a general direction from S.W. to N.E. The ranges W. of these are not well known.

2. **Plateaux.** The highlands of S. America are intimately connected with the great mountain systems, and are both extensive and elevated. The chief of them are the;—

a. *Plateau of Bolivia* or *Desaguadero*, which occupies the broadest part of the region between the double ranges of the Andes. Its extent is estimated at 100,000 sq. m., while its elevation reaches 13,000 ft. above the sea. The great lake of Titicaca lies on the N. part of this plateau.

b. *Tableland of Quito*, which also lies between the ranges of the Andes of Ecuador, in the N. It is 200 m. long, 30 m. broad, and lies at an elevation of 10,000 ft.

c. *Brazilian Tableland*, which lies among the Brazilian mountains and stretches S. from the Selvas of the Amazon to the estuary of the Rio de La Plata. Its mean elevation is from 2,000 to 3,000 ft. above the sea.

3. **Plains**, which are alike in being of almost boundless extent, but very unlike in physical character, climate, and productions. There are *three* of such tracts to be noticed here, viz., the—

a. *Llanos* ("Plains") of the *Orinoco*, which stretch E. from the Andes to the mouth of the Orinoco—a distance of about 1,000 m.—and S. from the Cordilleras of the coast to the plains of the Amazon near the equator. They are said to be 350,000 sq. m. in extent, and are so low and flat that their surface is flooded during the rainy season.

b. *Selvas* ("Forests") of the *Amazon*, which consist of impenetrable forests and vast plains covered by grass of the rankest growth. They are said to be 1,500 m. long, from 400 to 1,000 m. broad, and to cover an area of 1,500,000 sq. m. The intervals between the trees are occupied by a growth of underwood so dense that passages of only a few feet long can with difficulty be cleared with axes. Vegetation in general is of the most luxuriant growth and of great variety of species.

c. *Pampas* ("Treeless Plains") of the *La Plata*, which are said to be 700,000 sq. m. in extent, covered here with bushes, there with coarse grass, or tall thistles, and interspersed with reedy fens. In the dry season the plains become parched in many places, and devastating conflagrations occur which destroy millions of animals.

DRAINAGE.—The most stupendous system of river drainage in the world belongs to S. America. Three of its rivers, the Amazon, Orinoco, and La Plata, drain two-thirds of the whole continent. The chief draining agents are the

1. **Rivers**, the most important of which are those flowing

a. *Northwards*, into the *Caribbean Sea*, viz., the Magdalena, Atrato, Essequibo, Corentyn, Surinam, Maroni, Para, and Parahyba.

b. *Eastward*, and *N. Eastward*, into the *Atlantic*, viz., the Orinoco, Amazon, San Francisco, and Parahyba,

c. *South Eastward*, into the *Atlantic*, viz., the Rio de La Plata, Colorado, Salado, Negro, Chupat, Desire, and Santa Cruz.

Obs. 1. The *Magdalena*, the chief river of Colombia or New Granada, is the fourth in importance of the S. American rivers. It rises in the fork between the Central and E. Cordilleras of the N. Andes, traverses that enclosed region from S. to N., and after a course of 900 m., the greater part of which is navigable, enters the Caribbean Sea. Its chief tributary is the Cauca, which drains the region between the Central and W. Cordilleras. The Magdalena forms the sole outlet for most of the commerce of the United States of Colombia.

Obs. 2. The Orinoco ("coiling snake") rises among the S.W. defiles of the Parime System, flows W., N., and E., and, after a course of 1800 m., falls into the Atlantic through a small estuary. It forms a delta, the S. side of which is 130 m. long. Its chief *tributaries* are the Padamo, Ventuari, Caura, and Caroni on the right, and the Guaviare, Meta, and Apure on the left bank. The famous Cassiquiare, which connects the basins of the Orinoco and Amazon, is a broad navigable channel, which the Orinoco, in its upper course, sends off to the Rio Negro, a N. tributary of the Amazon. The waters of the Orinoco afford a navigable system of 8000 m. long.

Obs. 3. The Amazon,¹ called "the Mediterranean of South America," measured with respect to the abundance of its waters, is the grandest river in the world. In point of *length*—upwards of 4000 miles—it yields to the Missouri-Mississippi. It is formed of many branches, which themselves are mighty rivers, but its remotest sources are now considered to be the headwaters of the Apurimac, a tributary of the Ucayali, which flow from the vicinity of the Volcano Arequipa in the Peruvian Andes. After a generally N. course of more than 1200 m. the Ucayali joins the Marañon. From this point the Amazon flows E. for nearly 3000 m. to the Atlantic, which it enters, through a long estuary, under the Equator. Its chief *tributaries* are the Napo, Putumayo, Yapura, and Negro, from the N.; the Jurua, Purus, Madeira, Tapajos, Xingu, and Tocantins from the S. The *Area* drained by this river and its affluents, is estimated at upwards of 2,000,000 sq. m., the *length* of its navigable waters at 50,000 m.

Obs. 4. The Rio de la Plata is the name given to the great estuary of the Parana and Uruguay rivers. The *Parana* is formed by the union of the Parana-hyba, and the Grande or Para, and has its headwaters among the Brazilian Mts. It flows S. by W. over a course of 1800 m. and has for its chief *tributaries* the Paraguay, enlarged by the Pilcomayo, and the Salado, both of which it receives on its right bank. The *Uruguay* rises in the Serra Catharina, in S.E. Brazil, and flows S.W. and S. over a course of nearly 1000 m., until it meets the Parana, and joins with it to form the La Plata. The whole course of the La Plata, from its remotest sources, is 2400 m. long, and affords 20,000 m. of navigable waters.

2. **Lakes**, which, with the exception of Lake Titicaca, are not very important. *Titicaca*, in the S.E. corner of Peru, and on the Bolivian Tableland, covers an *area* of 4,600 sq. m., lies at an *elevation* of 12,545 ft. above the sea, is said to be very deep, and is subject to tremendous storms. Its waters are brackish.

Obs. Other S. American lakes which call for description are described under the States in which they lie.

CLIMATE.—The climate of S. America is naturally very much varied; but it is on the whole salubrious, and the temperature is nowhere so high as the geographical position of the continent would indicate, owing to the trade winds, the great highland regions, and other physical agencies. The hottest district of S. America lies along the shores of the Caribbean sea, where the highest temperature is 98° Fahr. in the shade. In the basin of the Amazon, which lies under the Equator, and comprises a third part of the continent, the climate is temperate, and not unhealthy. About the strait of Magellan, the temperature of the hottest month is not above 46° Fahr., and snow falls nearly every day. Between the parallels 7° and 32° S. lat. on the W. coast, there lies a rainless district of nearly 1,000 m. long.

PRODUCTIONS are extremely rich and varied. The most characteristic of them are given in the following table:—

¹ The Amazon was so called by Francisco d Orellana, in 1540, from the companies of women in arms which he professed to have seen on the banks of the river.

ANIMALS.	VEGETABLES.	MINERALS.
Beasts—1. <i>Domestic</i>. The llama and paco (beasts of burden) are the chief natives; the horse, ass, ox, sheep,¹ and hog have been imported and naturalised. 2. <i>Wild</i>. The jaguar, puma, apes, and monkeys in profusion. Birds. The condor (in the most inaccessible parts of the Andes), eagles, vultures, falcons, and swarms of gorgeous plumage-bearing birds. Fish. The seas and rivers swarm with fish of the most varied species. Reptiles include the boa, rattlesnake, and many species of poisonous serpents, crocodiles, alligators, lizards, &c. Insects comprise ants, termites, mosquitos, chigoes, locusts, &c.	Grain. Maize,² rice, wheat, millet, &c. Succulents. Yams, potatoes,³ pulses, &c. Fruit. Oranges, pine apples, limes, bananas, pomegranates, mawmorus, mangoes, cocoanuts, &c. Drugs. Copaiva, chinchona, jalap, sassafras, nux-vomica, American aloe, quassia bitter, and tinga bean. Timber is the product <i>par excellence</i> of S. America, two-thirds of the whole surface being covered by magnificent forests. The greenheart, mora, and rosewood, are the most distinctive and valuable kinds. Dyes. Indigo, and cochineal. Sundries. Tea, coffee, sugar, tobacco, tapioca, arrow-root, &c.	Precious Stones include diamonds,⁴ topazes, and other gems, in Brazil, Jasper in Chili, and emeralds in Ecuador. Precious Metals, embracing gold, silver, and quicksilver, in Columbia, Brazil, and Chili. Useful Metals, viz., copper, iron, lead, &c., in nearly all the countries. Sundries. Coal, sulphur, salt, salt-petre, alum, marble, building stone.

PEOPLE AND LANGUAGES.—The *population* of S. America is estimated at 26,984,000, and consists chiefly of Esquimaux-Americans, Patagonians, Malays, Mexicans, Peruvians, and Fuegians.

Obs. The *aboriginal races* are of a reddish copper colour, with long black hair, deeply set black eyes, aquiline nose, and often of handsome slender forms. Many of them have been partially civilised, but a much greater number of them are still in a state of barbarism. They possess no written *language*, and their spoken language is poor, harsh, and not expressive.

POLITICAL DIVISIONS.—S. America is at present divided into the following States, viz. :—

1. Colombia, or New Granada; 2. Venezuela; 3. The Guianas (British, Dutch, and French); 4. Brazil; 5. Ecuador; 6. Peru; 7. Bolivia; 8. Chili; 9. La Plata, or the Argentine Republic; 10. Paraguay; 11. Uruguay; 12. Patagonia.

¹ Horses and Cattle have so multiplied in numbers that their slaughter for hides alone is an important industry.

² Maize is the principal S. American product of this kind.

³ America is the home of the potato and tobacco, and thence they have spread into lands.

⁴ Brazil is the richest country in the world diamonds.

I.—COLOMBIA.

PHYSICAL FACTS.

Latitude, between 1° 30' S. and 12° 25' N. *Longitude*, between 69° 10' and 82° 18' W.
Estimated Area, 313,890 sq. m.

"THE United States of Colombia," formerly "New Granada," lie at the N.W. corner of S. America, and extend N. W., through the Isthmus of Panama to Costa Rica. They are bounded by the Caribbean Sea on the N.; Venezuela on the E.; Brazil, and Ecuador on the S.; and the Pacific Ocean on the W. The *coasts*, both on the N. and W., include some good harbours; the chief *inlets* are the Gulf of Darien on the N.; and the Gulf of Panama on the N.W. The chief *islands* are Quibo, off the Isthmus of Panama, and the Pearl Islands, in the Gulf of Panama. The *surface* is mountainous in the N. and W.; and hilly elsewhere. The *Andes of Colombia* consist of three principal ranges, viz., The Coast Range, which skirts the Pacific shore; Quindiu, the Middle Cordillera, which culminates in Tolima (18,020 ft.); and the E. Range, or Cordillera of the Coast (see p. 216, *Obs.* 1). Between the Central and Coast Ranges lie the *Tablelands of Bogota* and Tunja, which are upwards of 8,000 ft. above the sea, perfectly flat, and comprising barriers of rock, as though they had been the beds of some ancient lake. Immense plains stretch from the E. Range, to the E. frontier, which belong to the Llanos of the Orinoco, and are, in places, densely wooded and unhealthy. Some of the N. portions are alternately "grassy seas" and parched deserts. Colombia is well watered by the *rivers* Atrato, Magdalena with its great tributary the Cauca, Meta, Guaviari, Negro, and Japura. The *climate* is superb on the highlands and in the valleys of the Magdalena and Cauca; but along the coasts and on the plains it is hot, moist, and unhealthy. As there are great varieties of altitude so also are there great varieties of temperature. The *productions* are chiefly maize, wheat, rice, plantains, many tropical and European fruits, coffee, sugar, indiarubber, chinchona, tobacco, cotton, dye woods, ornamental woods; precious stones, gold, silver, platinum and other precious metals; while along the coasts are found pearls of the finest quality. The *population* in 1871 amounted to nearly 3 millions, above half of whom are of Spanish extraction: the remainder are mixed breeds of Spanish and Indian, and of Spanish and African blood. The *whites* mostly speak Spanish; the Indians, their own dialects.

POLITICAL FACTS.

POLITICAL DIVISIONS.—The United States of Colombia consist of 9 Independent States, and 6 National Territories. Their *capital* is Bogota.

The four *most populous towns* are *Bogota* (50,000), *Medellin* (30,000), *Socorro* (20,000), and *Panama* (18,338).

Obs. Bogota, on a small tributary of the Upper Magdalena, is the capital of the Republic. It is the centre of a large trade, the seat of a University, and the see of an Archbishop.

The chief *ports* are *Aspinwall*, *Porto Bello*, *Cartagena*, and *Sabanilla* (the port of Baranquilla), on the N.; *Panama*, and *Buenaventura*, on the W.

The chief *Industries* are *agriculture*, the *manufacture* of straw hats, and grass hammocks, at Panama, and *commerce*, which is carried on chiefly through the N. ports, and the Isthmus of Panama. The *communications* are defective and difficult except on the Isthmus. The traffic of the interior is carried on by

mule carriages, and along the rivers Magdalena and Cauca. The *government* is a Federal Republic, embracing the 9 States, each of which has its own legislature and governor. The chief *Religion* is Roman Catholicism; and *Education* receives much attention.

II.—VENEZUELA.

PHYSICAL FACTS.

Latitude, between 2° and 12° N. *Longitude*, between 61° and 72° 30' W. Estimated *Area*, 439,120 sq. m.

Venezuela¹ lies on the N. coast, immediately E. of Colombia, and mostly in the Valley of the Orinoco. It is 850 m. *long* from E. to W., and 700 m. *broad*. It has the Caribbean Sea, and the Atlantic on the N.; British Guiana on the E.; Brazil on the S.; and Colombia on the W. The *coastline* extends along the Caribbean Sea and the Atlantic Ocean, and though generally even, it contains some large *inlets*, especially the Sea of Maracaybo. The principal *islands* are Curaçao, Buen Ayre (see p. 214), Tortuga, Margarita, and Trinidad. But, though lying near the coast, and *physically* belonging to Venezuela, these islands, except Tortuga and Margarita, are included in the W. Indies, and belong *politically* to various European countries. The *surface* is mountainous in the N.W., N., S., and E.; while the W. belongs to the Llanos of the Orinoco. There are three *Mountain Systems*, viz., the Venezuelan Andes, or the N.E. continuation of the E. branch of the Colombian Cordillera, the Venezuelan Coast System, and the Sierra Parime. The S. consists of a vast and densely wooded plateau, which has not been much explored. The State is well watered by the Orinoco (see p. 214) and its tributaries, the Apure, Arauca, Ventuari, Caura, and Caroni. The Cassiquiare connects the Orinoco with the Negro, a tributary of the Amazon. The *climate* is tropical on the Llanos, and temperate, in varying degrees, on the highlands and mountains; earthquakes are frequent, and the rainy season lasts six months on the plains. The *soil* is exceedingly rich in the chief river valleys, and moderately fertile throughout most other parts. The *productions* include countless herds of cattle, which are raised on the Llanos; maize, timber, silver, tin, and copper. The principal vegetable productions are like those of Colombia. The *population* in 1873 was 1,784,197, a fourth of whom are Indians, the rest mixed breeds similar to those in Colombia. The *common language* and the language of literature, is Spanish.

POLITICAL FACTS.

The Republic of Venezuela consists of 21 States and 3 Territories. The capital is *Caracas* (pop. 48,897), which lies in the N.W., 12 m. from the sea, and does a large trade in the produce of the adjacent country.

The other most populous towns are *Valencia* (28,544), *Barquisimeto* (25,664), and *Maracaybo* (21,954).

The chief *ports* are *La Guayra*, *Bolivar*, *Maracaybo*, *Cabello*, *Barcelona*, and *Cumana*.

The *industries* are the same as those in the neighbouring state of Colombia. The *communications* are deplorably bad, including only some 70 m. of railway. The *government* is Republican in form, the *executive power* being vested in a President and Vice President, who are assisted by a cabinet of 6 ministers. *Education* is not utterly neglected, but it is in a wretchedly backward condition. The *State religion* is Roman Catholicism.

¹ Venezuela (= "Little Venice"), so called from the pile-dwellings (found by the Spaniards in the waters between the Gulf of Venezuela and Lake Maracaybo), which brought before the minds of Europeans the City of Venice.

III.—THE GUIANAS.¹

PHYSICAL FACTS.

The British,² Dutch,³ and French⁴ Guianas lie along the coast of the Atlantic between the rivers Orinoco and Amazon. They are *bounded* by the Atlantic on the N.; by Brazil on the E. and S., and by Venezuela on the W. They have an aggregate *area* of 178,348 sq. m. The *coasts* are unbroken and contain no large inlet. The *surface* is mountainous in the S. and W., and flat in the N., and large areas in various parts are covered by dense forests. The *chief rivers* are the Cuyuni, Essequibo, Demerara, Berbice, Corentyn, Surinam, Maroni, and Oyapok. The *climate* is salubrious, though tropical; it is much tempered by the sea-breezes and the humidity of the atmosphere. The *soil* is rich; the *productions*, such as are common to the tropical regions of America. It may be noted, however, that the gigantic water-lily (*Victoria Regia*) was first found in the river Berbice in 1837. The *population* is estimated at about 314,522, and consists chiefly of Indians, Negroes, mixed breeds, and Europeans. The *language* is English, Dutch, and French.

POLITICAL FACTS.

The territory of Guiana being in the occupation of the English, Dutch, and French, receives from these nations the designations of its different parts. British Guiana alone is subdivided into settlements.

COLONIES.	AREAS IN SQ. MILES.	POPULATION.	CHIEF TOWNS.
I. British Guiana.			
(1). Demerara.	85,425	218,909	George Town. ⁵
(2). Berbice.			
(3). Essequibo.			
II. Dutch Guiana or Surinam	46,058	68,531	Paramaribo. ⁵
III. French Guiana	46,865	27,082	Cayenne. ⁶

Obs. 1. Georgetown (pop. 28,000), the capital, on the coast at the mouth of the Demerara, is a Dutch-built town, and possesses numerous public buildings. It is a *seaport*, and is well defended by Fort Frederick William.

Obs. 2. Paramaribo (pop. 20,000), the capital of Dutch Guiana, is on the left bank of the Surinam, 10 m. above its mouth. The government establishments are situated at Fort Zeelandia, a little to the N. of the town, where also the governor resides.

Obs. 3. Cayenne (pop. 8,000), the capital of French Guiana, consists of an old and a new town. The old town is in a wretchedly dilapidated condition, but contains the government house; the new town is well built, and is traversed by good streets. The harbour of Cayenne, though shallow, is good.

Agriculture forms the chief occupation of the people, sugar, cocoa, and coffee being the staple articles of cultivation. *Commerce* is large, the chief *exports* being agricultural and forest produce; the *imports*, manufactured goods from Europe. *Communications* in the interior are sadly deficient, the chief mode of

¹ Guiana, so called from the Indian tribe "Guayanoes," includes a vast expanse of territory, besides that occupied by England, France, and Holland. The largest portions of Guiana belong to Brazil and Venezuela.

² British Guiana lies between Venezuela and the Corentyn River.

³ Dutch Guiana lies between the Corentyn River and the Maroweyne.

⁴ French Guiana lies between the Maroweyne and the Oyapok.

⁵ The streets of Georgetown and Paramaribo are intersected by canals, which here, as in Venice, take the place of roads.

⁶ Cayenne is notorious for its noxious climate, and as a French penal settlement for political offenders.

locomotion being by river boats. British Guiana is under a Governor and Court of Policy, consisting of 9 members. The *Religion* is chiefly Christian. *Education* is being looked after by the British Government; still, as yet, only 1 in 40 of the population is at school. *Dutch Guiana* is controlled by a Governor-General and a council appointed by the Government at the Hague. *French Guiana* is under the government of the Governor, who is assisted by a Lieut.-Governor, Privy Council, and a Colonial Council.

IV.—BRAZIL.

PHYSICAL FACTS.

Latitude, between 4° 25' and 32° 40' S. *Longitude*, between 34° 50' and 72° 50' W.
Estimated Area, 3,218,166 sq. m.

The Empire of Brazil, the most important State in S. America, touches every country in this Continent except Chili. It has on its N. frontier Colombia, Venezuela, Guiana, and the Atlantic; on the E. the Atlantic; on the S., Uruguay, and Paraguay; and on the W. Bolivia, Peru, and Ecuador. Its *length*, from N. to S. is 2,600 m., and its *breadth*, 2,540 m. The *coastline* is about 3,700 m. *long*, of great regularity, and for the most part, low; it includes some of the finest harbours in the world. The chief *inlets* are the estuaries of the Amazon, Para, and Maranhão, on the N.; the Bays of All Saints, Formosa, Rio Janeiro, and Paranagua on the E. The principal *capess* are Do Norte, on the N.; St. Roque, St. Thomé, and Frio on the E. The chief *islands* are Caviana, Mexiana, and Marajo or Johannes island, all in the estuary of the Amazon. The *surface* of the E. and central parts of Brazil consists of an extensive and mountain-traversed highland. The N. and N.W. portions form a vast lowland plain covered by the densest forests. The *mountains* of Brazil generally are noticed on p. 216, *Obs.* 3. The *drainage* belongs to the mightiest system of running waters upon earth. Its chief agents are the Amazon (see p. 218, *Obs.* 3) and its tributaries, and the Paranahyba, São Francisco, and Parana. The *climate* is, in general, healthy, and even temperate, although nearly the whole of Brazil lies within the tropics. The *mean annual temperature* at Rio Janeiro is about 73° Fahr.; but in the lowlands of the Amazon it rises to above 100°, and the *rainfall* is excessive. The *soil* in the lowlands and along the coast regions is of the richest and most fertile description, and yet perhaps less than a hundredth part of the surface is under cultivation. The *productions* comprise sugar, coffee, cocoa, sago, chinchona, cotton, timber, dye woods, drugs, gums, and indiarubber; hides, horns, tallow; diamonds¹, topazes, and other gems; gold, silver, quicksilver, platinum, copper, and iron. The *population* in 1872, was 11,108,291, and consists of Whites, or Brazilians, who are of European origin; Negroes, who are slaves: Native Indians, of no fixed habitations; and Mixed Races. The *language* of the dominant races is Portuguese.

POLITICAL FACTS.

POLITICAL DIVISIONS AND CHIEF TOWNS.—Brazil is divided into 20 *Provinces*, and has *Rio Janeiro* (pop. 274,972) for its capital.

Obs. *Rio Janeiro*, or Rio, on the magnificent bay of that name is the principal seaport of Brazil, and the finest capital in the New World.

¹ The Diamonds are found chiefly in the province of Minas Geraes.

The other chief cities are *Bahia* or *San Salvador* (128,929), *Pernambuco* (116,671), both important ports, *Belim* (35,000), and *Maranhão* (31,604).

The chief industries are *agriculture*—the chief objects of culture being coffee, maté, cotton, sugar, tobacco, and india-rubber.—*Cattle-rearing*, *mining*,—chiefly of diamonds, and gold—and *commerce*, the chief exports being coffee, cotton, sugar, maté, and india-rubber: *imports*, manufactured goods.

The *communications* embrace a *river navigation* of thousands of miles long, by which the produce of the remotest territories, can be placed on her commercial marts: 1721 m. of *railway*, and 4250 m. of *telegraphic lines*. The *government* is a Monarchy, and the only Monarchy in the New World. The *religion* is Roman Catholicism; and *education* is making progress under the care of the States.

V.—ECUADOR.

PHYSICAL FACTS.

Latitude, between 1° 40' N., and 5° 50' S. *Longitude*, between 69° and 81° 20' W.
Estimated *Area*, 248,312 sq. m.

Ecuador ("Equator") lies on the W. side of S. America, and almost entirely S. of the Equator. Its greatest *length*, from E. to W., 850 m., and greatest *breadth* 460 m. It has Colombia and Brazil on the N.; Brazil on the E.; Peru on the S.; and the Pacific on the W. The *coast* is bold and rugged from N. to S., exhibiting great *promontories*—as Capes San Francisco, and San Lorenzo, which are formed by terminations of spurs of the Andes—and including the *inlets*, Panguapi Bay, Manta Bay, and the Gulf of Guayaquil. The chief *islands* are Puna, and Santa Clara, in the Gulf of Guayaquil; and the Galapagos. The *surface* is mountainous in the W., and consists of a portion of the Andean highlands. East of the Andes, Ecuador forms part of the Great Amazonian Plain. The *mountains*, known as the Andes of Ecuador, consist of two colossal parallel ranges which traverse the W. side of the State from N. to S., and lie about 40 m. apart. They are distinguished as the 1. Eastern Cordillera, which rises to great elevations in its volcanic peaks, *Cayambe* (19,535 ft.), *Antisana* (19,137 ft.), *Cotopaxi* (18,875 ft.), and *Tunguragua* (15,960 ft.). 2. Western Cordillera, which includes the mighty *Chimborazo* (21,424 ft.), *Himital* (17,380 ft.), and *Pichincha* (15,936 ft.). The region between these ranges is divided by transverse mountain clumps into three great *tablelands*, viz., *The Tableland of Quito* in the N., which is 200 m. long, 30 m. broad, and 10,000 ft. high, and forms the very heart of the State: *The Tableland of Alausi*, called also "La Tapia" and "Ambato," in the middle, which is 8,500 ft. above the sea: and *The Tableland of Basin of Cuenca*, in the S., which has a mean elevation of 8,000 ft. The chief *rivers* are the Pastaca, Napo, Putumayo, and Japura, which are tributaries of the Amazon: and the Guayaquil, which flows into the Pacific, through the Gulf of Guayaquil. Every variety of *climate* is experienced in Ecuador; the temperature is tropical in the valleys and plains, temperate on the tablelands, and Arctic on the high mountains. At Quito, with a mean temperature of 61° Fahr., there is perpetual spring. The *soil*, in the valleys and along the plain, is of inexhaustible fertility. The *productions* include maize, wheat, rice, and other grain; coffee, cocoa, sugar; cotton, tobacco, india-rubber; chinchona, gums, resins, and other drugs; gold, quicksilver, lead, sulphur, etc.; and vast herds of cattle and sheep are pastured on the lowland plains.

The *population* is estimated at 946,033, about two thirds of whom are Whites of Spanish extraction; there are also some 200,000 Indians. The *language* of the Republic is Spanish.

POLITICAL FACTS.

Ecuador is divided into 11 *Provinces*, and has for its *Capital*, Quito.

Obs. Quito, (pop. 80,000), the capital of the Republic, lies near the Equator, on the high Tableland of Quito, between the E. and W. ranges of the Andes, at an elevation of nearly 10,000 ft. above the level of the sea, and enjoys a climate of perpetual spring in consequence of that elevation. It is the focus of the commerce of the surrounding region. Eleven snow-capped peaks are visible from the city, among which is *Pichincha*, a volcano that has twice nearly destroyed the city by its eruptions, viz., in 1757 and 1859 A.D.

Other important places are *Guayaquil*, the chief seaport of the Republic; *Cuenca*, the seat of a famous University, and *Loja*, formerly renowned for its chinchona forests.

Of the *Industries*, agriculture forms the principal occupation of the people; *Mining* is carried on only to a limited extent. *Fishing* is extensively pursued. *Manufactures* are almost confined to cotton and woollen fabrics of coarse texture, and straw hats. The *commerce* is considerable, and includes the *export* of grain, cocoa, gums, straw hats, Peruvian bark, cotton, precious metals, etc. The *constitution* of the country is a Republic. Its *government* is invested in a President, Vice-President, two Ministers, a Senate, and House of Representatives. Some attention is paid to *education*, *primary schools* being established in all the towns. The *religion* is Roman Catholicism.

VI.—PERU.

PHYSICAL FACTS.

Latitude, between 3° 30' and 21° 30' S. *Longitude*, between 68° and 81° W.
Estimated area 403,228 sq. m.

Peru occupies the central part of the Pacific coast. From N. W. to S.E. it is 1,243 m. long; its breadth varies from 150 to 650 m. It has Ecuador on the N., Brazil and Bolivia on the E.; Bolivia on the S.; and the Pacific on the W. The *coastline*, which extends about 1,600 m. from N.W. to S.E., is rocky and unbroken by any great inlet of the sea: it includes, however, the small Bays of Sechura, Samanco, Chorillos, and Pisco. The chief *capess* and *headlands* are Cape Blanco, and Points Pariña, Ahuja, and Huacas. The principal *islands* are the Lobos, Macabi, Guañape, and the Chincha groups, which all lie near the coast, and are very important on account of their rich guano deposits. The *surface* is exceedingly mountainous in the W.; the centre, from N. to S., consists of a great highland; between the mountainous region and the sea runs the "Costa," a hot, rainless lowland desert, varying from 20 to 50 m. in breadth; while the N.E. part of the country consists of a great elevated plain. The *Peruvian mountains* belong to the Andean system, and include numerous volcanic peaks of great height, especially *Chuguibamba* (21,000 ft.), and *Misti* (20,300 ft.). The huge mountain knots of Pasco and Cuzco unite the E. and W. Cordilleras, and form the tablelands of Pasco and Cuzco. The chief *rivers* are affluents of the Amazon. They are the Upper Marañon, Huallaga, and Ucayali, which is formed by the Apurimac, Urumba, and Camisca. Peru contains several *lakes*, but there are none of importance which belong exclusively to her. Titicaca (see p. 218) is only partly a Peruvian lake. The *climate* is celebrated as being amongst the most salubrious and genial climates in the world. The natural heat of the valleys is tempered by daily sea-breezes; and the absence of rain is to some extent compensated for by the "Garua," a species of fog which waters the ground. The *productions* include Peruvian sheep—as the llama, alpaca, vicuna, and guanaco; sugar,

coffee, cocoa; cotton, tobacco; timber, spices, indigo, chinchona, and other drugs; silver,¹ quicksilver, and copper; while native guano² is a most valuable production, almost peculiar to the Peruvian islands. The population in 1876 was 2,699,945, of whom about 350,000 are Indians, about a fourth are of mixed blood, and are called Cholos and Zambos, and the remainder are descended from Spaniards, Negroes, Chinese, Italians, and Germans. The *State language* is Spanish.

POLITICAL FACTS.³

The Republic of Peru is divided into 19 *Departments*, and 2 littoral Provinces, and has Lima for its *Capital*.

Obs. Lima, (pop. 100,078), on the Rimac, 7 m. from the Pacific coast, was founded by Pizarro (A.D. 1535), and contains his remains. It is the seat of the oldest university in America; it possesses a fine cathedral, a good library, some imposing public buildings, and nearly 60 churches. It is connected with Callao, its port, by railway.

Other important places are *Cuzco* (45,000) the old capital of the Incas.⁴ *Callao* (38,000) at the mouth of the Rimac, the chief port of Peru; *Arequipa* (35,000), near the volcano of Misti, a large trading centre; and *Pasco* and *Puno*, two of the most elevated cities in the world.

Other seaports are *Truxillo*, *Islay*, *Arica*, and *Iquique*.

Of *Industries*, agriculture forms the chief occupation of the people, and *mining* comes next. *Manufactures* are chiefly confined to coarse cotton and woollen cloths, and to gold and silver trinkets. The *commerce* of the country is considerable, and includes the *export* of guano, nitrate of soda, chinchona, bullion, and wool; and the *import* of manufactured goods from England and America chiefly. Peru contains a few good *roads*, but no wheeled vehicles are in use upon them. The commerce in the interior is carried on the backs of mules and llamas. *Railways*, however, and *river navigation*, are being now developed. There are 1,158 m. of *railway* at work, and about 600 m. of new lines in course of construction. *Telegraphic lines* also traverse various parts of the Republic. The *government* is vested in, 1. *A President*, elected for five years; 2. *A Senate*, composed of 36 members; 3. *A Chamber of Deputies*, each one of whom represents 20,000 inhabitants. Elementary *Schools* of the Lancastrian type have been established in the chief towns; but these are mostly for Whites. There are several institutions in the country for higher education, and many of the better classes are well educated. Roman Catholicism forms the chief *religion* of the State.

VII.—BOLIVIA.⁵

PHYSICAL FACTS.

Latitude, between 9° 30' and 25° 30' S. *Longitude*, between 58° and 70° 40' W. Estimated area 500,740 sq. m.

Bolivia, originally named Upper Peru, lies in the W. centre of S. America. Its *length*, from N. to S., is about 1,000 m., and its *breadth* 800 m. It has

¹ The silver mines of Potosi and Pasco, and the quicksilver mines of Huancavelica, are amongst the most famous in the world.

² *Guano*, a corrupted form of the Indian word *Huanu*—"manure."

³ Peru declared its independence in 1821. Until that time it belonged to Spain.

⁴ The Incas were a Peruvian dynasty which was governing the country at the time of its conquest by Pizarro in 1533. The progenitor of the Incas was Manco Capac, who founded Cuzco their capital, about 1050 A.D. The Incas declared

themselves to be the children of the Sun, married only among themselves, and after death were regarded as deities. It is now commonly believed that they were emigrants from E. China, and the Indian Isles.

⁵ So called from "Simon Bolivar," the liberator of South America from Spanish domination. He was born at Caracas in Venezuela, A.D. 1783, and was educated in Spain. From 1811 to 1816 he was carrying on the War of Independence, and died 1830.

Brazil on the N. and E.; the Argentine Republic, and Chili on the S.; the Pacific Ocean, and Peru on the W. The coast does not extend more than 250 m., and contains only the Bays of Mexillones, and Morena as *inlets*. The surface is mountainous in the centre, W., and S.W., and in these portions of Bolivia lies the highest¹ ground in S. America. The N. and E. parts consist of extensive plains. The Bolivian Andes include the great peaks *Sorata*, *Illimani*, *Sahama*, and *Atacama*, which are all upwards of 20,000 ft. high. The *Tableland of Bolivia* or *Desaguadero*, on the W. side of the country, is amongst the loftiest tablelands in the world. The chief *rivers* are the Beni, and Mamore, both of which flow N. into the Madeira; the Pilcomayo, which flows S.E. to the Paraguay; the Desaguadero, which flows S.E. from Lake Titicaca to Lake de Popochoro, of which it is the main feeder. The greater part of Bolivia lies within the tropics, yet, owing to the elevation and irregularity of its surface, nearly half the country is subject to temperate and cold *climates*. The tropical portion lies E. of the Andes, belongs to the Selvas and Plains of the Amazon, is insalubrious, and, at times, even pestilential. The desert of Atacama, which occupies the whole of the S.W. part of Bolivia, is dry and subject to earthquakes, while the highlands experience a cold, and sometimes even an Arctic climate. The most genial climate is found among the E. slopes of the E. Cordillera. The *productions* are the same as those of Peru. But we may notice, as belonging in a somewhat special way to Bolivia, the *condor*, the largest known bird of flight; and *coca*, a highly stimulating narcotic, found only here and in Peru. The *mineral wealth* of Bolivia is said to be inexhaustible, silver and copper being especially abundant.

Obs. The silver mines of *Caracoles*, in the desert of Atacama, recently discovered, give promise, it is said, of rivalling, or even of surpassing in productiveness, those of *Potosi*, which formerly yielded silver to the value of 280 millions sterling.

The *population* amounts to about 2,325,000, the greater part of whom are of Spanish descent; the remainder are Indians. The *language* of the dominant people is Spanish.

POLITICAL FACTS.

Bolivia is divided into 9 *Departments*, which are again sub-divided into *Provinces*, and has *Sucre* or *Chuquisaca* for capital.

Obs. *Sucre*¹ or *Chuquisaca*, the capital of Bolivia, lies between the upper valleys of the Pilcomayo and the Guapai, a tributary of the Mamore. It has a *population* of about 24,000, lies at an elevation of nearly 10,000 ft., and possesses a fine cathedral, a university, and several churches.

Other *important places* are *La Paz* (76,372), off the S.E. corner of Lake Titicaca, the largest Bolivian city, and the commercial entrepôt between Bolivia and Peru. *Cochabamba* (40,678), which manufactures glass-ware, and coarse cottons; *Potosi* (22,580), on the E. slope of the E. Cordillera, one of the loftiest cities in the world, and formerly famous for its silver mines; *Cobiya*, the only seaport of Bolivia; and *Orre*, and *Caracoles*, centres of rich silver deposits.

Agriculture forms the chief occupation of the people, but even this is not vigorously carried on. *Mining*, silver and copper especially, comes next; but this branch of industry also languishes. *Commerce* too is very limited. All these great branches of industry are thus crippled for want of good roads and other communications necessary to trading operations. The natural resources of the country are practically inexhaustible, but the coast-line is so limited in extent, and so difficult of access from the interior, because of the Andes² and the

¹ Sucre takes its name from General Sucre, who gained the Battle of Ayacucho in S. Peru, in 1824.

² The Bolivian Andes are crossed only by a few perilous passes at an elevation of some 16,000 feet.

desert between them and the sea, that Bolivia is virtually isolated from the markets of the world. There is, however, a prospect of improvement, for railways are being made which will join La Paz with Tacna, and Caracoles with Mexillones on the Pacific coast. Bolivia is a *Republic*, and the administration of its affairs is vested in a President and a Legislative Assembly, consisting of a Chamber of Tribunes, a Chamber of Senators, and a Chamber of Censors. The President is elected for four years. *Education* is at a very low ebb, although the capital possesses a university and other educational institutions. The *Religion* is Roman Catholicism.

VIII.—CHILI, OR CHILE.

PHYSICAL FACTS.

Latitude, between 24° and 55° S. *Longitude*, between 67° 35' and 74° 30' W. Estimated area 124,084 sq. m.

Obs. These limits and area include the Archipelago of Chilöe,¹ and the Patagonian territory.

Chili lies between the Andes and the Pacific Ocean. It is *bounded* on the N. by Bolivia; on the E. by La Plata or the Argentine Confederation; on the S. and W. by the Pacific. The *coast* extends in a remarkably unbroken line for 1300 m. The best known *inlets* are Fox Bay, Concepcion Bay, and the Gulf of Peñas. The chief *capés* are Points Lavapie, and Galera. The *islands* are St. Ambrose, St. Felix, the two islands of Juan Fernandez, one of which was in the solitary occupation of Alexander Selkirk from 1705-9, and furnished the scene of Robinson Crusoe's adventures, the Archipelago of Chilöe—the chief island of which, Chilöe, has 70,000 inhabitants, is famous for its vast deposits of coal, and is fertile and well wooded, but the climate is too damp for any productions which require sun to ripen them—the Chonos Archipelago, Wellington Island, Madre de Dios Archipelago, Hanover Island, Adelaide Island, and the Archipelago of Tierra del Fuego. The *surface* is formed mainly by the steep W. slopes of the Andes, and a narrow plain which stretches along the Pacific coast; but very much of the country is sandy, sterile, and uncultivable. The chief *mountains* are the *Andes*, which run between Chili and the Argentine Confederation, and include some of the loftiest summits in S. America, *e.g.*, *Aconcagua* and *Tupungato*. Chili has no large *rivers*; the mountains are too near the coast, and the watersheds too numerous and abrupt for their formation. The chief are the Coquimbo, the Aconcagua, Maypu, Maule, and Biobia. The Biobia, about 200 m. long, is the largest river in Chili. None of them are navigable for more than a few miles from the sea. The *climate*, except in the N., where it is hot, and rainless, is genial and salubrious, but earthquakes are frequent. The *productions* include nearly all the domestic animals of Europe, which here attain a size and perfection unknown in the Old World; and the most useful animals indigenous to S. America, *e.g.*, the guanaco, llama, &c. The exceeding fertility of some parts of Chili makes it one of the best grain-producing regions in the world. The chief *fruits* of temperate climates grow here in great perfection, and there is abundance of excellent and valuable *timber*. The *minerals* especially are valuable, and embrace gold, silver, copper, iron, coal, mercury, tin, &c. Copper and silver, however, are the chief of them. The *population* amounts to 2,136,724, consisting of Whites, or Chilenos, who are of Spanish descent, and speak the Spanish language; Indians, who have made some advance in civilisation, but speak their own languages; Mixed Races; Negroes, and European Settlers. The general *language* is Spanish.

¹ The Province of Chilöe includes not only the island of that name, but the Archipelago S. of it and nominally, the strip of coast W. of the Andes down to the Straits of Magellan.

POLITICAL FACTS.

Chili is divided into 19 *Provinces*, and has Santiago for its *capital*.

Obs. **Santiago** (pop. 129,807) lies on the slopes of the Andes and is a handsome city, surrounded by most striking scenery, and possessing a university and many other educational institutions. Railways connect it with Valparaiso, and Curico. Santiago has suffered much at various times from earthquakes.

Other important places are *Valparaiso* (97,737), the commercial capital and chief port of Chili; *Chillan* (19,044), *Concepcion* (18,277), *Talca* (17,496); and *Copiapo*, and *San Felipe*, centres of important mining districts. *Caldera* and *Cochimbo* are seaports.

Agriculture forms the chief occupation of the people, and is in a very advanced state. *Mining*,¹ especially of copper, silver, and coal, is actively and profitably pursued. *Manufactures* are increasing, and now include iron, copper, and earthenwares, coarse woollen and cotton fabrics, spirits, soap, cordage, &c. The *commerce* is very considerable, comprising the *export* of copper, silver, wheat, and hides; and the *import* of cotton, woollen, linen, and silk fabrics, hardware, machinery, &c. Chili has constructed and is constructing for herself a very complete system of *railways*. She has now in operation eight lines, with a total length of 1056 m., and has more in course of construction.

The *government* is a Republic, and is composed of, 1. An Executive Power which is vested in a President—elected for 5 years—and a Council of State; 2. A Legislative Power, which consists of a Senate of 20 members—who take office for 9 years—and a Chamber of Deputies, elected for 3 years; 3. A Judicial Power. *Education*. Chili devotes a good round sum annually in support of her common schools, which are open to all the population. Superior education is fairly well provided for in the university and colleges of Santiago. The *religion* is Roman Catholicism.

IX.—LA PLATA,² OR THE ARGENTINE REPUBLIC.

PHYSICAL FACTS.

Latitude, between 22° and 53° S. *Longitude*, between 57° and 72° W. *Estimated area* 1,619,470 sq. m..

Obs. These limits include the Patagonian portion of the Republic.

The Argentine Republic has Bolivia on the N.; Paraguay, Brazil, Uruguay, and the Atlantic, on the E.; the Strait of Magellan on the S.; and Chile on the W. The *coast* extends on the E. side from the Rio de la Plata to the Rio Negro. Much of it is rocky and unfavourable for navigation. The chief *capes* are San Antonio, and Corrientes. The chief *inlets* are the estuary of the La Plata, and the Bays of Sanborombon, and Blanco. The *surface* is mountainous in the W., from N. to S., being occupied by the E. slopes of the Andes; the interior and E. portions embrace several extensive plains³ and deserts, *e.g.*, the Gran Chaco, or Great Desert, on the N., which bears nothing but patches of long grass and a few thistles; and the Pampas Argentinas, in the centre, vast plains which bear a luxuriant herbage, and include many salt lakes. The principal *mountains* are the Andes, which stretch N. and S. between La Plata and Chile, throughout

¹ There are in operation no less than 1670 copper, 270 silver, and 670 coal mines.

² *Plata*, and *Argentum* (from which the name "Argentine") are, respectively, the Spanish

and Latin equivalents of the English word *Silver*.

³ Plains constitute five-sixths of the area of La Plata.

the whole length of the State. The chief *tablelands* are the Despoblado ("un-inhabited"), an arid and sterile region, which lies in the N.W., among the E. slopes of the Andes, at an elevation of 13,000 ft., and the plateau of Tucuman, which occupies a lower level S.E. of the Despoblado. This copiously watered Republic has for its chief draining agents the *rivers*, La Plata with its mighty continuation the Parana, the Pilcomayo, Vermejo, and Salado, tributaries of the Parana, the Colorado, and Negro, which all fall into the Atlantic. The *climate* varies with the varied elevations of the country, but is generally healthy. The valleys and plains are hot and oppressive, while the Tucuman and Despoblado Plateaux, and the higher Andean slopes experience the rigours of the Polar Regions. Its general characteristic is humidity. The Republic is rich in resources of all kinds. The *animals* include horses, cattle, sheep, and goats, which are pastured in vast herds throughout the "Pampas." The *vegetable productions* comprise wheat, barley, oats, rye, maize, potatoes, &c., *fruits* of great excellence and variety; sugar, cotton, cocoa, &c.; timber, and various dye plants. *Minerals* of great value are distributed throughout the mountainous districts, and include precious stones, gold, silver, copper, nickel, lead, tin, coal, salt, petroleum, &c.

The *population* is now estimated at 2,400,000, and consists of Whites, chiefly of Spanish descent (Creoles); but Europeans, of various nationalities, are very numerous. Indians occupy parts of the Gran Chaco, and the valley of the Negro River, but they are not numerous. The *language* is Spanish.

POLITICAL FACTS.

The Argentine Republic is a confederation of 14 *Provinces* and 4 *Territories*, and has for its *capital* Buenos Ayres.

Obs. Buenos Ayres (pop. 200,000) lies on the right bank of the Rio de la Plata, and is the chief port of the Republic. It is well and regularly built, contains some fine churches, and some important educational institutions, and stands at the head of four railways.

Other *important places* are Rosario (30,000) on the left bank of the Parana, the entrepôt of the commerce of the interior provinces. Cordova (28,523) a large commercial centre, and Jujuy, an important military position which commands the passes into Bolivia.

Pasturing and cattle breeding form the chief occupations of the people; and the principal sources of wealth are the animal productions, wool, tallow, hides, horns, horse-hair, jerked-beef, and ostrich-feathers. *Agriculture* is fast assuming great proportions, and is being carried on in the most approved and scientific manner. *Manufactures* are, as yet, but in their infancy, and are almost confined to woollen fabrics, leather, soap, spirits, &c. The *commerce* is already large, and is rapidly increasing. The *exports* are chiefly wool, skins, tallow, hoofs, hair, and cattle; the chief *imports*, cotton and woollen goods, hardware, and machinery. The *internal communications* are being made to keep pace with the rapidly increasing commerce. Nearly all the *rivers* are navigable; there are plenty of good *roads*; 1,900 m. of *railway* are in operation, 894 m. in course of construction, and about 1,200 m. more projected. *Telegraphic wires* intersect the provinces in every direction. The *Government* takes the form of a *Federal Republic*. Each State has the management of its own internal affairs; but the business of the Commonwealth is discharged by a President, in whom is vested the *executive power*; and a National Congress, consisting of 78 deputies, in which is vested the *legislative power*. *Education* is on a good basis, and every town of the interior has night schools, grammar schools, colleges, &c., where free instruction is offered to all. The established *religion* is Roman Catholicism.

X.—PARAGUAY.

PHYSICAL FACTS.

Latitude, between 21° 50' and 27° 35' S. *Longitude*, between 54° 40' and 58° W. Estimated area 56,698 sq. m.

Paraguay is the only S. American State which has no sea-board. It lies entirely between the Rivers Paraguay and Parana,¹ and has Brazil on the N. and E., and the Argentine Republic on the S. and W. It is about 400 m. long from N. to S., and 200 m. broad. The surface is marshy and low in the S. and W.; and hilly in the N. and E. A range of hills, the *Cordillera Maracaya*, lies on the N.E. frontier; and a second range, the *Cordillera de Cadguasu*, runs N. and S. through the centre of the country. Paraguay is most copiously watered: its W. side by the Rivers Aquidaban, Ypane, Tejui, and Tebicuary, tributaries of the Paraguay; its E. side by the Acaray, and Munda-ij, tributaries of the Parana. The Parana and its tributary, the Paraguay, compensate the country to a great extent for its want of coast-line. The climate is temperate and salubrious. The temperature in summer averages about 88°; in winter, about 63° Fahrenheit; it is, however, liable to sudden changes from the winds, which are very variable. The animal productions are of the same character as those of Brazil. The vegetable productions are varied and valuable, but that which is most distinctive of the country is the Yerba maté,² or Paraguayan tea, which attains perfection nowhere else in the world. The population is estimated at 293,844, and consists of Whites, descended from the Spanish; Immigrants, mostly Europeans, Negroes, Indians, and Mixed Races. The State language is Spanish; but the Indians speak their own languages, and chiefly Guarani.

POLITICAL FACTS.

The Republic of Paraguay is divided into 25 *Departments*. The chief towns are—*Asuncion* (pop. 20,000), the capital, which lies on the Paraguay, and is a place of considerable trade, especially in Paraguayan tea, timber, tobacco, and hides. *Concepcion*, the chief port for the Paraguayan tea trade, on the Paraguay, 180 m. N. of the capital. *Paraguari*, and *Villa Rica*, in the interior, to the S.E. of the capital.

The chief *Industry* is *agriculture*, especially the cultivation of maté, sugar-cane; tobacco, cotton, and grain of various kinds. The rivers form the chief means of communication, but there is also a railway from Asuncion to Paraguari. The government is *Republican* in name, but in reality it is a *Dictatorship*. The President is elected for life. The Legislative Congress consists of a Senate and a Chamber of Deputies. *Education* is in a waning condition owing to the exhausted condition of the State since its disastrous war with Brazil, the Argentine Republic and Uruguay (1865-1870). The religion of the country is Roman Catholicism, but there is toleration for other religions.

¹ And for this reason has been called the *Meso-* | *potamia* of S. America.

² Yerba Mate is the dried leaf of the Brazilian holly.

XI.—URUGUAY.

PHYSICAL FACTS.

Latitude, between 30° and 35° S. *Longitude*, between 53° 30' and 59° W. Estimated area 72,151 sq. m.

The complete name, "Banda Oriental del Uruguay," defines generally the position of the Republic. It has Brazil on the N.; Brazil and the Atlantic on the E.; the Atlantic, and the Rio de la Plata on the S.; and the Argentine Confederation on the W. The coast is even and unbroken, but contains a few fairly good harbours, as Maldonado, Montevideo, and Colonia. The principal cape is Santa Maria, at the S.E. extremity. The surface is low along the coast and in the S.W., and forms a broken plateau in the interior, traversed by low hill ranges, of which the highest, *Sierra de los Animas*, does not exceed 1000 ft. Uruguay is abundantly watered throughout, the largest rivers being the *Ibicuy* and the *Rio Negro*, tributaries of the Uruguay. The climate, though humid, is temperate and healthy. The animal and vegetable productions are mainly the same as those of the Argentine Republic. The population is estimated at 440,000, and is composed of, 1. Whites, of Spanish descent; 2. Negroes; and 3. Mixed Races. There are no Indians in Uruguay. The language is Spanish.

POLITICAL FACTS.

POLITICAL DIVISIONS AND TOWNS—Uruguay is divided into 13 *Provinces*, which are named from their chief towns. The chief towns are—

Montevideo (pop. 91,167), the capital, which is also the chief seaport of the Republic. *Maldonado*, and *Colonia*, other seaports. *Fray Bentos*, and *Paysandu*, on the Uruguay, are important centres of the manufacture of tinned meats.

Pasturing—cattle, horses, and sheep;—and *agriculture*—the raising of grain, rice, sugar, cotton, hemp, and fruits—form the chief occupations of the people. The commerce¹ of the country is becoming considerable, the chief exports being preserved meats, tallow, hides, wool, horns, and hoofs. The communications include numerous rivers which are navigable for small craft; 195 m. of railways opened for traffic, and 225 m. more which are being constructed. The *Uruguay River*, however, is the great commercial highway of the Republic. The government consists of a President, who is elected for four years, a Senate, and a Chamber of Representatives. Education in any public sense of the word can hardly be said to exist. The chief religion is Roman Catholicism.

XII.—PATAGONIA.²

GENERAL GEOGRAPHY.

Patagonia is the name given to the arid and sterile region which extends S. from the Rio Negro to the Straits of Magellan, and is enclosed by the Atlantic and Pacific Oceans. The surface of the country is marked in the W. by the S. Andes, which skirt the coast as a lofty chain of volcanic peaks. A great shingle desert interspersed with patches of coarse grass, occupies much of the central

¹ The commerce is almost entirely in the hand of foreigners.

² Patagonia is so called from "Patagians,"

the name given to the Indian tribes by Magellan from the appearance of their sandalled feet, which were like the hoofs (pata) of an animal.

portion, and of the remainder there is but little of any value. The chief *rivers* are the Rio Negro, Chupat, Desire, and Santa Cruz, which flow E. to the Atlantic in deep gorges which they have worn out for themselves. The *climate* is humid in the W., dry in the E., and very severe in the S. Wild cattle and horses wander over the country in large herds, but the guanaco is the most characteristic *animal*. The *population* is very sparse, consisting of some 30,000 *Indians*. The stories of their remarkable height seem to be exaggerations. The most recent and best informed observers give the average height as being about 5 ft. 10 in. Their manner of life is nomadic; their *religion* is Pagan. Though this territory is shared by Chile and the Argentine Confederation, there is no settled form of government, nor are there any towns which call for notice.

III. GREENLAND.¹

GENERAL GEOGRAPHY.

Greenland, as described on our maps, may be compared to a huge wedge of land hanging down from the N. Pole. It is thought to be an aggregation of islands, separated from one another by narrow inlets, channels, or fjords, but bound together by a thick covering of ice. The known portion of this continental land lies between $59^{\circ} 49'$ and $82^{\circ} 54'$ N. lat; and between 17° and 67° W. long. The area is estimated at about 760,000 sq. m. It has the Atlantic and Arctic Oceans on the E.; the Greenland Sea, on the S.; Davis Strait, Baffin Bay, Smith Strait, Smith Sound, Kennedy Strait, Robson Channel, and Lincoln Sea on the W. The N. portion awaits exploration. The known *coasts* are rocky and mountainous, precipices of 5,000 ft. high rising in places abruptly from the sea, and almost everywhere penetrated by deep indentations of the sea. The W. coast is fairly well known; the E. coast not so well. The chief *capes* are Bismarck, and Brewster, on the E.; Farewell, (on an island), in the S.; York, Parry, Bryant, May, and Britannia, on the W. The *inlets* are very numerous; but the chief of them are Dove Bay, Franz Josef Fjord, Davy Sound, and Scoresby Sound, on the E.; Disco Bay, Umanak Fjord, Melville Bay, Murchison Sound, Peabody Bay, Petermann Fjord, Newman Bay, and St. George's Fjord, on the W. The principal *islands* are Shannon, Clavering, and Liverpool, on the E.; and Disco, on the W. The *surface* is described as consisting of an outer circle, and an interior region. The *outer circle* extends from the sea towards the interior for from 20 to 60 m., embraces numerous narrow, and tortuous inlets of the sea, and is crossed by many valleys which afford passages from one fjord to another, and much pasturage for flocks. In the vicinity of these fjords there is a luxuriant vegetation which gradually increases towards the termination. At the head of the fjords a wall of ice rises abruptly from the ground and forms the unbroken edge of the *interior region*, which consists of an elevated icy plateau, an ice waste, of some 320,000 sq. m. in extent, covered with a huge *mer de glace* of fresh water ice that slopes gently down to the sea, supplying the mighty glaciers and icebergs which characterise the appearance and encumber the seas of Greenland. Of the few lofty elevations which the country boasts, the highest is *Petermann Peak* (14,000 ft.) near the head of Franz Josef Fjord. The *Drainage* is not effected by *rivers* properly so called, but by glaciers and icebergs which flow to the sea down the valleys and fjords of the country. The pools of water which cover the ice from the melting of the snow in summer either find their way over the edge of the inland region in

¹ Greenland was so called by Red Erik, who discovered it (A.D. 983), because, as he said to his friends in Iceland, "people would sooner be induced to go thither in case it had a good name."

countless diminutive cataracts, or disappearing down deep crevasses of the ice, are carried to the sea by sub-glacial rivers. Lakes are common everywhere, but they are frozen from September to June. The climate is Arctic, and increases in severity from S. to N. The *mean average temperature* is 27.5° Fahr. The *mirage* is a very frequent appearance at all seasons; *halos* are common everywhere and at all seasons; and the *Aurora Borealis* is a phenomenon everywhere observable, especially in the autumn. The chief *Productions* are dogs, reindeer, musk ox, foxes; ptarmigan, eider ducks; seals, whales, and fish in great variety; coal, iron, and graphite. The *Population* consists of Esquimaux, and a few European colonists who are chiefly Danes. Within the Danish settlements there are about 10,000 souls; and scanty tribes of the Esquimaux race are scattered about beyond the limits of these settlements.

The *political facts* relate only to that part of the W. coast region which forms the Danish trading districts. It stretches from Cape Farewell in the S. to about 74° N. lat. and at lat. 67° 40' is divided into N. and S. Greenland. North Greenland comprises 7 and S. Greenland 5 of the trading districts. Each district moreover includes several trading stations. The districts are, in the S., *Julianshaab*, *Frederikshaab*, *Godtshaab*, *Sukkertoppen*, *Holstenborg*; in the N. *Egedesminde*, *Christianshaab*, *Jakobshavn*, *Godhavn*, *Ritenbenk*, *Umanak*, and *Upernivik*. The people are chiefly occupied in fishing and hunting, and produce for *export*, furs, eider-down, reindeer, and oil. The *Christian Religion* is taught to the people by Moravian missionaries who have several permanent stations among them.

OCEANIC TERRITORIES.

To this heading belong those 3 great regions under which geographers sometimes group the numerous islands of the Pacific and Antarctic Oceans.—viz. : 1. Malaysia; 2. Australasia; 3. Polynesia.

I. MALAYSIA.¹

Malaysia is the name given to that large archipelago which lies between S. Asia and Australia. The whole group forms a triangular wedge of islands which separates the Indian Ocean and Chinese Sea from the Pacific. It is more than six times as large as the British Isles, is almost entirely of volcanic origin, contains many volcanoes which are still active, and is composed principally of the following groups, viz. : 1. The *Philippines*; 2. The *Borneo Group*; 3. The *Celebes Group*; 4. The *Moluccas* or *Spice Islands*; 5. The *Sunda Islands*.

i. The *Philippines*² are a group of upwards of 400 islands, besides rocks and uninhabited islets. Their aggregate *area* is about 114,000 sq. m. and their *population* about 8,000,000, consisting chiefly of Malays and Negritos, part of whom are Christians, and part Mohammedans. The chief islands are *Luzon*, *Samar*, *Leyte*, *Mindanao*, *Sulu Archipelago*, *Palawan*, *Mindoro*, *Masbate*, *Panay*, *Negros*, *Zebu*, and *Bohol*. They are generally mountainous and well watered. The *climate* is tropical, but, on the whole, salubrious. The *soil* is most fertile and yields vast quantities of tobacco, sugar, rice, coffee, hemp, indigo, &c. *Minerals* also, including copper, iron, coal, sulphur, &c., abound. After Cuba these islands are the most valuable of the Spanish possessions. The *capital* of the group is *Manila*, a town of 130,000 inhabitants, on the S. W. coast of *Luzon*. It was famous before its recent (1880) destruction by earthquake, for its excellent cigars, and has an extensive, but declining commerce with Great Britain, Spain, India, China, and America.

ii. The *Borneo Group* consists of the large island of *Borneo* and the small islands of *Labuan*, off the N. W. coast, and the more westerly groups of *South Natuna*, *Natuna*, and *Anamba*.

Obs. 1. *Borneo* lies in the middle of the Malaysian Archipelago. Its *area* is about 280,000 sq. m., and its *population* about 1,700,000. The interior is mountainous and the coasts low, and there are some large navigable rivers. The *climate* is salubrious and the *soil* fertile. The *animal productions* include the horse, ox, and pig, the deer, tapirs, wild-boars, buffaloes and orang-outang, which is peculiar to this island and the neighbouring Sumatra. Of the *vegetable productions* the chief are sago—

¹ Malaysia is so called because the islands are peopled chiefly by the Malay race.

² The Philippine Islands were so named by Magellan, their discoverer, after the Spanish

king Philip II. Soon after discovering these islands Magellan and some of his companions were treacherously destroyed by the natives of one of them in 1521.

the principal food of the natives—maize, rice, cocoa-nut, benzoin—a fragrant gum—and gutta-percha; and valuable timber is yielded by the forests. The *minerals* of Borneo are especially valuable, and include diamonds, platinum, tin, copper, and excellent coal. The *population* consists of *Dyaks* or Aborigines, Malays, who have settled in large numbers on the coasts and navigable rivers for commercial purposes, Chinese, who carry on the mining of the island, and Europeans, chiefly English and Dutch traders.

Much of the island is divided into small independent states, which are governed by native chiefs. The province of Sarawak on the W. coast, is an English settlement. The Dutch have settlements on the S.E. coast and on the S.W. coast, with Benjermassin, Sambasy, and Pontianak, for their stations. Other *chief towns* are Bruni, or Borneo, on the N.W. coasts, formerly the capital of an independent kingdom, Sarawak, on the river Sarawak, 17 m. from the W. coast, the station of the British settlement.

Obs. 2. Labuan, is 6 m. from the N.W. coast and 30 m. N. of Borneo. It was ceded to Great Britain in 1846 by the Sultan of Bruni. Its *population* consists of about 5000, of whom only some 50 are Whites. The *area* of the island is about 45 sq. m. It contains a good seaport and valuable coal mines. Its *chief town* is Victoria where the English colony has its head-quarters.

Obs. 3. The S. Natuna, Natuna, and Anamba Islands, are three small groups which lie between Borneo and the Malay Peninsula. They have no claims to any further description here.

iii. The *Celebes Group* lies E. of Borneo, and is separated from it by the Macassar Strait. It consists of the large irregular island of *Celebes*, *Peling*, the small *Zulla Group*, *Boeton*, and numerous other islets.

Obs. 1. Celebes has for its mean lat. about 2° S. and mean long. 122° E. Its *area* is about 66,700 sq. m., and its *population* 473,963. The *surface* is mountainous; the *climate*, though hot, is healthy, and the *soil* fertile. The *animal productions* include the anoa, a savage kind of antelope, about the size of a goat, which is peculiar to these islands, the turtle, and the trepang, or sea-cucumber. Chief among its *vegetable productions* are rice, maize, sago, sugar, tobacco, cotton, and Macassar oil. The *minerals* comprise diamonds, gold, iron, sulphur, salt, &c. The *people* belong to the aboriginal races of the *Bugis*, who are very intelligent, and much given to commercial pursuits, and the *Horaforas*, who occupy the central regions of the island. The island is under the control of the Dutch, who have extensive establishments at Menado and Kema, in the N., and Macassar in the S.W. The *commerce* of Celebes includes the *export* of edible birds' nests, cotton, pearls, and tortoise shell.

Obs. 2. Peling and the *Zulla Group* on the E.; *Boeton*, and *Moena* on the S.E.; and the numerous islets fringing the Celebes coasts, do not call for particular description here.

iv. The *Moluccas*,¹ or *Spice Islands* are a widely spread group between the Celebes, and New Guinea, the chief of which are *Mortai*, *Almahera* or *Gilolo*, *Batchian*, *Obi*, *Buru*, *Amboyna*, *Ceram*, and the *Kei Isles*. Their aggregate *area* is about 42,900 sq. m., and their *population* 331,879, consisting chiefly of Malays, Papuans, Chinese, Japanese, and a few Europeans. The group is very fertile and yields nutmegs, cloves,² mace, cinnamon, pepper, and other spices; fine fruits, cocoa, sago, and valuable timber. These islands belong chiefly to the Dutch, who have stations on most of them; and notably at Amboyna, the chief seat of their power in this region.

v. The *Sunda Islands* form the base of the Malaysian Peninsula, and lie between the Java Sea and the Indian Ocean. They comprise *Sumatra* and the numerous small islands on each side of it, viz. *Banca*, *Billiton*, &c., on the E.; *Hog Island*, *Nias*, *Steen Islands*, *Mantawi Islands*, and *Nassau Islands* on the W. *Java*, *Bali*, *Lombok*, *Sumbawa*, *Sandalwood*, *Flores*, *Ombay*, *Wetter*, *Timor*, and a large number of small islands and islets in the vicinity of these.

Obs. 1. Sumatra, the largest and most westerly island of the group, is about 1000 m. long from N.W. to S.E., has an *area* of 177,000 sq. m., and a *population* of

¹ *Moluccas*, an Arabic word — "The Royal Isles." The name at first was only given to those islands of the group upon which the chief rulers

of the Archipelago resided.

² *Clove*, from French *Cloves*—a nail.

more than 2,000,000, who are chiefly Malays, and Papuans. A lofty mountain chain which culminates in *Indrapura Peak* (12,140 ft.) traverses the island near the W. coast; but the central and E. parts are undulating and flat, fairly well watered, and in places densely wooded. The *climate*, except on the mountains, is hot, unpleasant, and insalubrious. The *soil* is fertile, producing pepper, ginger, nutmegs, cloves, mace, rice, sago, cocoa-nuts, betel-nuts, fine fruits, camphor, and gutta-percha; hard, and sweet woods, abound in the forests. Sumatra is also rich in *minerals*, yielding gold, copper, tin, sulphur, and coal. The *Dutch* are paramount in the island, and have important settlements at Padang, and Bencoolen on the W. coast, also at Lambourg, and Palembang. The principal native states are Acheen on the N. coast, and Siak.

Obs. 2. **Java**, the head-quarters of the Dutch in the East, and the most populous and important island in Malaysia, lies S.E. of Sumatra, and is separated from it by the Sunda Strait. Its N. shores are washed by the Java Sea, and its S. shores by the Indian Ocean. Its *area* with Madura, is 51,974 sq. m., and its *population* 17,855,840. The island is traversed from E. to W. by a chain of volcanic mountains which culminate in *Mt. Semeroc* (12,150 ft.) and includes many active cones. The *climate* is excessively hot in the plains, but generally healthy; earthquakes and thunderstorms are very frequent, and the rainy season lasts six months, from October to April. The *soil* is fertile, producing rice, maize, sago, coffee, sugar, tobacco, indigo, spices, and vegetable oils. The forests produce excellent teak, and there grows the deadly upas tree. The sea-cucumber, edible birds' nests, and betel-nuts, are also among the Javanese productions. The *people* are Malays, and are more civilised than the dwellers on any other of these islands. Their *religion* is a mixture of Mohammedanism and Buddhism, but Christianity also exists among them. By far the greater part of the island belongs to the Dutch, whose capital is *Batavia*, a town of 135,000 inhabitants, at the N.W. corner of the island. It is an excellent port, and a most important centre of commerce. *Surabaya* (130,000) at the N.E. corner, and *Samarang* (22,000) on the N. coast, are the other *chief towns*, and most flourishing trading depôts.

Obs. 3. **Bali, Lombok, Sumbawa, Sandalwood, Flores, Timor**, and the other Sunda Islands, stretch E. from Java in a long chain, being separated from one another merely by narrow straits. They are all important, yielding products similar to those of Java, and being occupied by kindred tribes. *Timor* and *Solor* have fallen very much under Portuguese influence, but the rest are chiefly Dutch.

II. AUSTRALASIA.¹

Under the term Australasia is comprised here the island or continent, *Australia*, *Tasmania* or *Van Diemen's Land*, and *New Zealand*, together with the small islands in their respective vicinities.

i. AUSTRALIA.²

Latitude. Between 10° 39' and 39° 11' S. lat. *Longitude.* Between 113° and 164° E. long.
Estimated area. About 3,000,000 sq. m.

Obs. Australia, the largest island in the world, is sometimes called the sixth and smallest continent. Its greatest *length*, from E. to W., is 2,400 m.; its greatest *breadth*, from N. to S. 2,000 m.

POSITION AND BOUNDARIES.—Australia lies S. by E. of Asia. It is bounded on the

N. by the Timor Sea, Arafura Sea, and Torres Strait; E. by the S. Pacific Ocean; S. by Bass Strait, and the Indian Ocean; and W. by the Indian Ocean.

¹ Called also "Melanesia," in reference to its dark-skinned peoples. | ² Australia (Lat. *Australis* = "South.") = "the Southern Land."

COASTS.—These have an estimated extent of 8000 m., and except on the N. are not deeply indented. The chief features are the

1. **Capes**, Stewart, Arnhem, and York on the N.; Melville, Tribulation, Byron, and Howe, on the E.; Otway, Nelson, Northumberland, Jervis, Spencer, Catastrophe, Radstock, Adieu, and Leeuwin on the S.; Cuvier, North West Lévêque, and Londonderry on the W.

Obs. The extreme points are Cape York on the N., Cape Howe on the S.E., and Cape Leeuwin on the S.W.

2. **Inlets**, Cambridge Gulf, Van Diemen Gulf, and the Gulf of Carpentaria, on the N.; Princess Charlotte, Trinity, Hervey, Moreton Bays, and Port Jackson, on the E.; Port Philip, Encounter Bay, St. Vincent Gulf, Spencer Gulf, Great Australian Bight, and Flinders Bay on the S.; Geographe Bay, Shark Bay, Exmouth Gulf, King George Sound, Collier Bay, and Admiralty Gulf, on the W.
3. **Straits**, Torres, on the N., between York Peninsula, and New Guinea; Bass, on the S. between the mainland and Tasmania.

Obs. The **Great Barrier Reef**, a coral belt of some 1,200 m. long, skirts the N.E. coast, at a distance varying from 20 to 150 m., and forms a natural and most effective breakwater for the swell of the Pacific.

ISLANDS.—The islands adjacent to Australia are neither numerous nor important. The chief of them are Bathurst, and Melville off the N.E.; Groote Eylandt in the Gulf of Carpentaria; Fraser, Norton, and Stradbroke off the E.; Kangaroo off the S.; Dirk Hartog, and Dorre off the W.

SURFACE.—The surface generally has but a small elevation above the sea, especially in the interior, which consists of vast barren or grassy plains. In the E. and S.E. there is a mountainous belt, which extends about 150 m. from the coast towards the interior. There is a belt of highland country, skirting parts of the W. coast, and another, of smaller proportions, in the centre. The chief ranges of the

1. **Eastern Belt**, going from S. to N. are the *Australian Alps* or *Munions Mts.*, which embrace *Mt. Kosciusko* (7,176 ft.) the highest point in Australia; the *Blue Mts.*, which culminate in *Beemarang* (4,100 ft.), the *Liverpool Range* which runs E. and W. and culminates at its E. extremity in *Mt. Sea View* (6,000 ft.), the *New England Range* which has for its loftiest summit *Ben Lomond* (5,000 ft.), *Macpherson Range* which branches off E. and terminates on the coast in Point Danger: its culminating point is *Mt. Lindsay* (5,700 ft.). Then come the *Mountains of Queensland* which comprise a *Coast Range* consisting of a large series of small ranges, and an inner mountainous district which terminates on the shores of the Gulf of Carpentaria (see Queensland, p. 241).
2. The **South Eastern Belt**, which comprises a Western continuation of the *Australian Alps*, (in their entirety known as "The Great Divide," and the *Grampian Mts.*, a series of transverse ranges running N. and S. at the W. end of the Great Divide, and culminating in *Mt. William* (3,825 ft.).
3. The **Central Highlands**, which run, with occasional interruptions from the S. to the N. coast; they comprise *Flinders Range*, which runs N. and W. from the E. shore of Spencer Gulf, and embraces several summits—e.g. *Mt. Remarkable*, *Mt. Arden*, and *Mt. Serle*—of 3,000 ft. high; the *Gawler Range*, *Warburton Range*, *Stuart Range*, *Musgrave Range*, *Mac Donnell Range*, with *Mt. Giles* (3,800 ft.), and *Ashburton Range*.
4. The **Western Belt**, which going from S. to N. comprises the *Darling*, *Smith*,

Herschel, and *Victoria Ranges*, which lie near, and follow the coast. The highest point is *Mt. William*, (3,600 ft.) in the Darling Range; the *Lockyer Range* with an outlying peak, *Mt. Augustus* (3,580 ft.), and *Hamersley Range*, culminating in *Mt. Bruce* (3,800 ft.).

PLAINS.—The interior of Australia, so far as it is known, appears to consist of a succession of monotonous pastures, low hills, and desert plains, which are either altogether barren, or covered by patches of thin grass, or long belts of “scrub.” Between the Australian Alps, Blue Mountains, etc., and the Pacific Ocean, for a distance of 2,000 m., stretches an uninterrupted succession of well-watered and fertile valleys, well adapted for agriculture, and where European grains and fruits are grown in abundance. The “Riverine District,” between the rivers Darling and Murray, comprises the vast pastures of New South Wales which are divided off into “sheep runs” of great extent.

DRAINAGE.—Owing to the absence of great mountains in the interior, there is a corresponding absence of great rivers, and consequently a very inadequate supply of water. Only two of the larger rivers flow throughout the year, and many of the streams in the interior never reach the sea at all, but are either dried up or lost in marshes and swamps. Such drainage as does reach the sea flows down from slopes which turn respectively towards the N., the E., the S.W., and the W. The chief draining agents are the

1. **Rivers**, which flow down the

a. *N. Slope* into the

(a). *Timor Sea*, viz., The Victoria, Daly, Adelaide, and S. Alligator.

(b). *The Gulf of Carpentaria*, viz., The Roper, Albert, Flinders, Van Diemen, and Mitchell.

b. *E. Slope*, into the *Pacific Ocean*, viz., the Burdekin, Fitzroy, Burnett, Brisbane, Clarence, Hawkesbury, and Shoalhaven.

c. *S.E. Slope*, into the *Indian Ocean*, viz., The Murray or Galba, and the Broughton.

d. *W. Slope*, into the *Indian Ocean*, viz., the Blackwood, Swan, Murchison, Gascoyne, Ashburton, Fortescue, Yule, and De Grey.

Obs. 1. Much of the drainage from the W. slope of the E. Mountain Belt, and from the E. slope of the Central Belt is *continental*, finding its way through *Cooper's Creek* or *Barcoo River* on the one hand, and through the *Neale* or *Alberga River* on the other into Lake Eyre.

Obs. 2. The *Murray*, the most important river in Australia, rises among the W. defiles of the Australian Alps, flows N.W., W., and S.E., over a course of 1,120 m., and falls into the Indian Ocean through Encounter Bay. Throughout the greater part of its course it forms the boundary between the colonies of New South Wales and Victoria. Its chief *tributaries* are the Goulburn, and Loddon on the left bank; the Murrumbidgee, enlarged by the Lachlan, and the Darling or Callewatta or Barwan with its affluents the Condamine and Warrego from the N., and the Castlereagh, and Bogan from the S., on the right bank. The Murray is navigable for small steamers throughout the greater part of its course.

2. **Lakes**, which form a characteristic feature of this Continent. They lie mainly in three districts, viz., in

a. *Western Victoria*, where the chief instances are Lakes Alexandria, and Tyrrell.

b. *South Australia*, the most important lake district, which comprises Lakes Torrens, Gairdner, Eyre, and others.

c. West Australia, where they are numerous and small, and where the chief examples are Lakes Moore, and Austin.

Obs. Most of the Australian lakes are shallow and salt.

CLIMATE.—Dryness is the characteristic quality of the Australian climate; but at the same time it is extremely healthy, is said to resemble the climate of Madeira, and to be everywhere, except on the N. coast, favourable to the European constitution. The *mean annual temperature* at Brisbane, the metropolis, is 68° Fahr. The highlands in the S.E. region enjoy a more temperate climate, but the climate of the desert interior is probably the hottest in the world.

PRODUCTIONS.—The Australian fauna is special to that continent, and is marked by the low organisation of its indigenous animals. Of the 150 species of *mammals*, no less than 105 belong to the *marsupials* or pouched animals, the chief of which are the kangaroos, opossums, and bandycoots: ruminants, pachyderms, and quadrumans are entirely absent from the aboriginal fauna. The wild dog (“dingo”), the terror of the flocks, is almost the only carnivorous animal of the continent. Of *birds* there is greater variety, and they are remarkable for the beauty of their plumage. The most characteristic species are the emus, cockatoos, paroquets, pigeons, and pelicans. Lizards and snakes are numerous, and the rivers under the tropics are tenanted by large crocodiles. Almost all animals useful to man have been imported into Australia within the last century, and have thriven and multiplied wonderfully.

The *flora*, like the fauna of Australia, is special to the country. The trees and shrubs are mostly evergreens, and food plants are not numerous. The most characteristic trees are *gum-trees* (Eucalypti), which are found on the Eastern maritime slopes, where they attain large dimensions, and the *red cedar* (*Cedrela Australis*). The chief objects of culture are cereals, maize, fruits, sugar, coffee, arrowroot, tobacco, olives, spices, etc. The *mineral wealth* of Australia is incalculable, comprising gold, silver, copper, iron, lead, tin, coal, etc.

PEOPLE AND LANGUAGE.—The *Population* in 1876 was 1,965,876, of whom all but some 55,000 Maoris, are of European and Chinese origin. The Maoris, or Aboriginal Australians, belong to the family of Oceanic negroes, and, generally speaking, have resisted the efforts which have been made to civilise them. They have no fixed habitation, and their numbers are rapidly decreasing. The *Language* of the colonists is English.

POLITICAL CONDITION.—Australia belongs to the British Empire, and comprises 5 separate colonies, viz.: 1. *Queensland*; 2. *New South Wales*; 3. *Victoria*; 4. *South Australia*; 5. *Western Australia*.

Obs. The nearest port of Australia is 11,000 m. distant from England.

1. QUEENSLAND.¹

PHYSICAL FACTS.

Latitude. Between 10° 39' and 29° S. *Longitude.* Between 138° and 153° 33' E.

The estimated area is 669,520 sq. m., or nearly 8 times that of Great Britain.

This colony comprises the N.E. portion of the continent. It is *bounded* on the N. by the Gulf of Carpentaria, and Torres Strait; on the E. by the Pacific Ocean; on the S. by the colony of New South Wales; and on the W. by Alexandra Land. It is 1,300 m. *long* from N. to S., and 800 m. *broad*. Its *coast-line* is about 2,550 m. *long*, and is well suited by reason of its excellent harbours for commerce. Its chief *capas* are York, Melville, Flattery, Grafton, Gloucester, Palmerston, Manifold, and Sandy Cape on Great Sandy Island. The chief *inlets* are Shelburne, Charlotte, Halifax, Edgecumbe, Repulse, Shoalwater, Keppel, Hervey, and Moreton Bays. The *surface* is mountainous on the E. side, where it embraces the N. portion of the E. mountain belt: the chief *ranges* are the Coast Range, which runs nearly parallel with the coast at a mean distance of 50 m., embraces numerous small ranges, and culminates in the *Bellenden Mt.* (5,438 ft.), Main Range, which runs inland of the Coast Range, and comprises the Craig, Denham, Carnarvon, Peak, Drummond, and other ranges, and Macpherson Range, which culminates in *Mt. Lindsay* (5,700 ft.); and numerous hill ranges of less altitude. Of *rivers*, great and small, Queensland has a large number; the chief of them are the Albert, Leichhardt, Flinders, Norman, Van Diemen, and Mitchell, flowing into the Gulf of Carpentaria; the Burdekin (with its S. tributary Belyando), Fitzroy (with its tributaries the Dawson and Isaac), Burnett, and Brisbane, which flow E. into the Pacific Ocean; the Victoria or Barcoo flows towards Cooper's Creek, while the Condamine or Balonne, and the Warrego, go S.W. and S. respectively, to join the Murray. The *climate*, though generally salubrious and exhilarating, is hot and moist on much of the Pacific shore; on the highlands it is more temperate. The *productions* include corn, European and tropical fruits, rice, arrowroot, sugar, coffee, cotton, timber, &c. gold, copper, tin, iron, mercury, &c. The *population* is 173,000, and embraces Aborigines, Chinese, Polynesians, and colonists of European origin. The *language* is English.

POLITICAL FACTS.

Queensland is divided into 12 *districts*, and has for its *capital* *Brisbane* (pop. 26,953), on the river Brisbane, 25 m. above its mouth, an Episcopal city and flourishing port, whence are exported wool, preserved meats, cotton, timber, and sugar. It is the focus of the railways and of the commerce of the colony. It was originally settled as a penal station in 1825 by Sir Thomas Brisbane, the then Governor of Australia. Other *chief towns* are *Rockhampton*, an important port on the Fitzroy river, *Bowen* or *Port Denison*, a seaport on Edgecumbe Bay, *Ipawich*, on the Bremer river, *Maryborough*, a busy port on the Mary river, *Townsville*, on Cleveland Bay, and *Cardwell*, on Rockingham Bay. The chief *industries* are grazing and cattle-rearing, agriculture, mining, and commerce. The chief *exports* comprise metals, wool, hides, tallow, and preserved meats: the *imports*, every description of manufactured goods, the bulk coming from the United Kingdom. The *communications* include some good *roads*, which were made by convict labour; many of the *rivers* are navigable for a considerable distance towards the interior; there are upwards of 500 m. of *railway* open for traffic, and several new lines under construction. The *government* is vested in a Governor, who represents the Queen, an Executive Council, and a Parliament of two Houses, the Legislative Council, and the Legislative Assembly. The *religion* of the colony is chiefly Protestant, and there is no State Church. *Education* is free and secular, and under State control.

¹ Queensland was so named by Queen Victoria | Wales. It was formerly known as the Moreton in 1859, when it was separated from New South Bay District.

II. NEW SOUTH WALES.¹

PHYSICAL FACTS.

Latitude. Between 28° 10' and 37° 28' S. *Longitude.* Between 141° and 153° 40' E.

The estimated area is 323,437 sq. m., or about 5 times that of England and Wales.

Greatest length, 900 m.; greatest breadth, 850 m.

New South Wales, the oldest of the British colonies in Australia, lies in the S.E. part of the island. It is bounded by Queensland on the N., the Pacific on the E., Victoria on the S., and S. Australia on the W. The coast-line is about 900 m. long, and comprises some excellent harbours. The chief capes are Danger, Byron, Sugarloaf, St. George, Green, and Howe; the inlets, Shoal Bay, Clarence Bay, Port Stephens, Broken Bay, Port Jackson, Botany Bay, Jervis Bay, Bateman Bay, and Twofold Bay. The surface consists of a coast district, which is an undulating plain, traversed by many streams, and about 70 m. wide; a region of tablelands, separated from the coast region by the Blue Mountains, and extending W. of these mountains far into the interior; and a region of vast plains which occupies the territory W. of the tablelands, and forms the "Riverina," or chief pasture lands of this colony. The chief mountains belong to the S. part of the E. mountainous belt, and embraces the New England Range, which stretches from the N. frontier to Sugar Loaf Head, and sends off westward the Liverpool Range; and The Blue Mountains, which stretch S. from the Hunter River, embrace Mount Kosciusko (7,176 ft.), the highest peak in the colony. Near the W. frontier are Gray Range, and Stanley Range. The rivers all rise in the E. belt, the largest of them flowing S.W. to the Murray, which forms the S. boundary of the colony. They are the Darling with its N. affluents, the Culgoa, and Warrego, and its S. affluents the Gwydir, Namoi, Castlereagh, Macquarie, and Bogan; and the Murrumbidgee with its great tributary the Lachlan. Of the rivers flowing E. into the Pacific, the chief are the Richmond, Clarence, Maclean, Hastings, Hunter, Hawkesbury, and Shoalhaven. The climate, though much varied, is extremely salubrious, and epidemic diseases are scarcely known. The mean annual temperature at Sydney is about 63° Fahr. The productions include animals of the marsupial order, of which the kangaroo may be taken as the type. Birds exist in great variety, and many have most gorgeous plumage, e.g., cockatoos, parrots, and paroquets. Eagles, cranes, herons, black swans, brush turkeys, and emus, are plentiful, and widely distributed. Bats of almost all kinds are numerous, as also are snakes, lizards, and pestiferous insects. The vegetable productions most characteristic of the colony are the exceedingly hard and valuable timbers, the ferns, and grazing shrubs, cotton, tobacco, and sugar. The quandong and the native cherry seem to be the only native fruits.² The mineral resources of the colony are incalculable: they comprise gold, silver, copper, iron, tin, coal, and kerosene shale. The people number 629,776, and are chiefly English and other Europeans; there are some Aborigines, and about 4,000 Chinese, who are largely engaged in gold-digging. The language is English.

Obs. Norfolk Island, formerly a British penal settlement, and afterwards for a time the home of the inhabitants of Pitcairn Island, lies 900 m. E. of Sydney, and belongs to New South Wales.

POLITICAL FACTS.

This colony is divided into *Pastoral Divisions*, of which there are 13, and *Counties*, of which there are 118. It has for its capital *Sydney* (134,756), the "Queen of the Pacific," and the parent city of Australia. It lies on the shores of

¹ New South Wales was first settled by convicts 1788, and was a penal settlement till 1838. No convicts were sent into this colony after 1843.

² Nearly all European, and many semi-tropical fruits have been naturalised, and now flourish in the colony.

Port Jackson, is connected with the interior by several railways, has a university, is the See of the Metropolitan, and the chief seaport of New South Wales. Other chief towns are *Newcastle* (7,645), at the mouth of the Hunter River, the great coal port; *Paramatta* (6,103), 14 m. W. of Sydney, the second oldest town in the colony; *Bathurst* (5,000), on the Macquarie, the chief town in the W. districts; *Goulburn* (4,453), at the S.W. terminus of the Sydney railway, is the depôt of the S. inland trade, and the chief town in the S. gold-mining district; and *Deniliquin* (3,000), the principal place of importance in the Riverine district. The chief industries are agriculture and grazing, mining, manufactures, and commerce. The chief exports are wool, gold, live-stock, coal, copper, tallow, leather, and preserved meats; imports, manufactured goods generally. The communications include some excellent roads in the vicinity of the large towns; numbers of rivers which are navigable for some distance from the sea; 598 m. of finished railway, and 10,000 m. of telegraphic wire. The constitution of this colony vests the Legislative power in a Parliament of two houses, called the Legislative Council and the Legislative Assembly. The Legislative Council consists of 21 members nominated by the Crown for 5 years; and the Assembly, of 72 members, elected from 60 constituencies. Primary schools, which are largely aided by the State, prevail all over the colony. There are also an excellent grammar school, which was founded, and is supported, by the State; and a university at Sydney.

III. VICTORIA.¹

PHYSICAL FACTS.

Latitude. Between 34° 30' and 39° 30' S. *Longitude.* Between 141° and 150° E.
The estimated area is 88,451 sq. m.

The colony of Victoria lies at the S.E. extremity of Australia. It is bounded on the N. and N.E. by New South Wales; on the S. by Bass Strait and the S. Pacific; and on the W. by the Colony of S. Australia. The coast-line extends about 600 m., and is broken by numerous capes and bays. Its most prominent features are the *Capes* Howe, Ram's Head, Wilson Promontory, Liptrap, Point Nepean, Otway,² Nelson, and Bridgewater; and the *inlets*, Port Albert, Corner Inlet, Patterson Bay, Western Port, Port Phillip, Portland Bay, Bridgewater Bay, and Discovery Bay. The surface is mountainous except in the N. and N.W., and the colony is traversed by the W. extension of the Australian Alps, which forms its chief watershed, and is called "The Great Dividing Range." It embraces several peaks of upwards of 2,000 ft., and terminates in the Grampian Mts. Branching N. from the Great Divide are the three parallel ranges Benamra, Bogong which culminates in *Mt. Hotham* (6,414 ft.) the highest point in the colony, and Buffalo. The colony is very inadequately watered, and contains but few navigable³ streams: the chief rivers are the Murray, which forms the boundary line between Victoria and New South Wales, and its tributaries the Mitta Mitta, Ovens, Goulburn, Campaspe, and Loddon, all rising on the N. side of the Great Divide; flowing from the S. side to the ocean are the Snowy River, Mitchell, Latrobe, Yarra Yarra, Werribee, Hopkins, and Glenelg. Most of the Victorian rivers are dried up during the hot season. There are many lakes, both of salt and fresh water; the chief of them are King, Victoria, and Wellington Lakes, on the sea coast, Gorangamite, Buloke, Hind-

¹ Port Phillip was separated from New South Wales in 1851, and erected into a separate colony under the name "Victoria."

by emigrants.

³ The absence of navigable rivers is a great obstacle to the complete development of the colony.

² Cape Otway is usually the first land sighted

marsh, and Tyrrell in the W. interior. The *climate* is dry and not uncongenial to the European constitution. It is, however, liable to sudden and excessive changes, from the hot winds which occasionally blow from 20 to 30 hours at a time. Of *soil* there are large areas which can hardly be surpassed for fertility, very much of which forms excellent grazing grounds. The *animals and vegetables* are of much the same kinds as those in New S. Wales. The *mineral wealth* of the colony is prodigious, and includes diamonds, sapphires, gold,¹ silver, tin, copper, lead, antimony, coal, lignite, etc. The *population* numbers 840,300, nearly all of whom are of European origin: there are about 18,000 Chinese, and less than 1,000 Aborigines. The *language* is English.

POLITICAL FACTS.

The colony is divided into 4 *Districts*, viz., Gipps Land, the Murray, Winmera and Loddon; 6 *Provinces*, and 37 *Counties*,² and has for its *capital Melbourne* (247,079), the largest city in Australia, on the Yarra Yarra, at the head of Port Phillip. It is a magnificent modern city, containing some fine public buildings, and is also an Episcopal See. Its *port* is Sandridge, 2½ m. up the river, and railways connect it with most parts of the colony. Other *chief towns* are *Bal-larat* (47,156), the leading gold-field town and the second most important town in Victoria; *Geelong* (23,545), 45 m. S.W. of Melbourne on Corio Bay (a W. arm of Port Phillip) a large seaport, and a busy manufacturing town; *Belfast*, and *Portland*, other seaports; and *Castlemaine* a centre of great mining activity. The *chief industries* are agriculture and grazing, mining, meat preserving, and manufacturing. The *commerce* is very large: the *exports* include wool, gold, preserved meats, tallow, and hides: the *imports*, timber, manufactured goods, sugar, spirits, and provisions. Excellent *roads* connect the chief towns together. There are also 1,035 m. of *railway* at work, and 5,404 m. of *telegraph wire*. The colony is under the control of, 1. A Governor, who is appointed by the British Government for seven years; 2. An Executive Council; 3. Two Houses of Legislature. *Education* is very general, and is carried on in "common schools," grammar schools, colleges, and private educational establishments. All public schools are under the supervision of the Board of Education.

IV. SOUTH AUSTRALIA.³

PHYSICAL FACTS.

Latitude. Between 11° and 36° S. *Longitude.* Between 129° and 141° E.
Estimated area, 903,690 sq. m.

Obs. This colony now includes the entire central division of Australia, from the S. to the N. shores, a distance of 2,000 m., with a breadth of 700 m. But only about a tenth part of this enormous area is settled.

South Australia is *bounded* on the N. by the Arafura Sea, and the Gulf of Carpentaria; on the E. by Queensland, New South Wales, and Victoria; on the S. by the Indian Ocean; and on the W. by Western Australia, and the Timor Sea. The *coasts* of this colony both on the N. and S. are irregular and deeply penetrated by arms of the ocean. The chief coast features are, on the S., the *capes* Northumberland, Bernouilli, Jervis, Spencer, Catastrophe, Wiles, Whidby (Point), Radstock, Westall, Brown (Point), and Adieu; *inlets*, Encounter Bay, St. Vincent Gulf, Spencer Gulf, Coffin Bay, Anxious Bay, and Streaky Bay; on the N. *capes*, Hay, Ford, Blaze, Stewart, Wessel (on Wessel Island), Wilber-

¹ The Dividing Range embraces the richest gold-field known.

² The colony is also divided into 6 *Electoral*

Provinces, which are subdivided into *Electoral Districts*.

³ South Australia was first colonised in 1836.

force, and Arnhem; *inlets*, Queen's Channel, Anson Bay, Port Darwin, Adam Bay, Van Diemen Gulf, Mt. Norris Bay, Castlereagh Bay, Arnhem Bay, Melville Bay, and Limmen Bight. The chief Australian *islands* belong to this colony, viz., on the S. Kangaroo Island, Investigator Group, and Nuits Archipelago; on the N., Bathurst, Melville, Wessel, and Groote Islands. The chief *straits* are on the S., Backstairs Passage between the mainland and Kangaroo Island, and Investigator Strait, between York Peninsula and Kangaroo Island; on the N., Apsley Strait, between Bathurst and Melville Islands, and Dundas Strait, between Melville Island and the mainland. With regard to the *surface* of S. Australia, the centre is traversed from N. to S. by a broken line of high ground, which embraces some well-defined hill-ranges. The chief of these are the Ashburton Range towards the N.; the Mac Donnell Range, near the centre; the Stuart Range, the Gawler Ranges, in the S., Flinders Range, and Mt. Lofty Range in the S.E. On either side this central high ridge are immense *plains*, some of which are arid and stony; others, great sand deserts; and others, again, rich in pasturage. They have never been thoroughly explored, and are not, as yet, generally distinguished by names. The chief *rivers*, are the Roper, Alligator, Adelaide, Daly, and Victoria, in the N.; the Neale, and Barcoo, in the centre, draining into Lake Eyre; and the Murray in the S. *Lakes* are numerous; and the largest of them are Eyre, Gairdner, and Torrens in the S., and Amadeus in the W. The *climate*, during two-thirds of the year, is most delightful, greatly resembling that of Sicily and Naples. December, January, and February, the three summer months, are very disagreeable, both from the great heat of the sun, and from the hot winds which blow occasionally during these months. The *soil* is of every variety, from that which is sterile to that which can hardly be excelled in fertility. The *vegetable productions* include, not only all such species as are found in England, but many of the semi-tropical grains, and fruits also; wheat, however, and grapes thrive especially well in this colony. The *animals* are mostly such as have been naturalized. The *mineral resources* include copper, gold, silver, bismuth, iron, etc. The *people* number 225,677, and consist of Europeans, Chinese, and Aborigines. Their *language* is English.

POLITICAL FACTS.

The colony is divided into 4 *Pastoral Districts*, and 35 *Counties*, and has for its *capital* Adelaide (31,573), a well-built and commodious city on the small River Torrens, 8 m. from the E. coast of the Gulf of St. Vincent. Other *chief towns* are *Port Adelaide*, the chief seaport of the colony and port of the capital; *Port Lincoln*, and *Port Augusta*, on Spencer Gulf; *Kapunda*, 40 m. N.E. of Adelaide, and *Koorunga* on the Burra Creek, important mining centres; and *Palmerston* on Port Darwin, the chief settlement in the N. territory and the terminus of the British Australian submarine cable. The chief *industries* are agriculture and grazing, mining, and commerce; the principal *exports* are wool, corn, flour, and copper; *imports*, manufactured goods, tea, coffee, sugar, tobacco, mineral oils, timber, and spices. The *communications* include some good *roads* in the settled parts of the colony, 456 m. of *railway*, and 5,686 m. of *telegraph wires*, including an overland line of 2,000 m. long, from Adelaide in the S. to Port Darwin in the N., where it is in connexion with the British American cable, and so placing S. Australia in telegraphic communication with all parts of the world. The *government* of the colony includes an executive power, which is in the hands of the Governor and a council of 5 ministers, and a Legislative Council which serves for 12 years, and a House of Assembly, consisting of 36 members elected for three years, but liable to be dissolved by the Governor. The *religion* is Christianity without State aid; *education* is under State control, and receives much fostering attention.

V. WEST AUSTRALIA.¹

PHYSICAL FACTS.

Latitude. Between 13° 44' and 35° S. *Longitude.* Between 113° and 129° E.
The area is estimated at 975,824 sq. m.

Obs. This colony comprises all Australia W. of the 129th meridian; it is some 1250 m. long from N. to S., and about 800 m. broad. The settled part is confined to the S.W. corner, and is about 320 m. long by 160 m. wide, with an extension of settlements along the coast to the mining districts of Victoria, and to the Murchison river.

West Australia is bounded on the N. by the Timor Sea; on the W. and S. by the Indian Ocean; and on the E. by the colony of S. Australia. The shores are considerably indented with small inlets of the ocean. They are of a bold and rocky character in the W. and S.W., and fringed by numerous islands. The coast-line is about 2000 m. long. The chief capes are Hood Point, Howe, Chatham, Entrecasteaux, and Leeuwin, on the S.; Naturaliste, Steep Point, Cuvier, North W., and Lévéque, on the W.; Bougainville, and Londonderry, on the N. The principal inlets are the Great Australian Bight, Doubtful Island Bay, King George Sound, and Flinders Bay, on the S.; Geographe Bay, Freycinet Bay, Gantheaume Bay, Hamelin Harbour, Sharks Bay, Exmouth Gulf, Nickol Bay, King Sound, Collier Bay, Brunswick Bay, and Admiralty Gulf, on the W.; Cambridge Gulf, on the N. The chief islands are the Recherche Archipelago off the S. coast: the Houtman rocks, Dirk Hartog, Dorre, Bernier, Barrow, Dampier Archipelago, and the Buccaneer Archipelago off the W. coast. The straits to be noted are the Geelvink Channel, between the mainland and the Houtman rocks, Naturaliste Channel, between the islands Dirk Hartog and Dorre, and Geographe Channel, which forms the N. entrance to Sharks Bay. The surface of the settled or S.W. portion of this colony is generally level, often undulating, and sometimes hilly. Speaking of the whole colony, it may be described as a vast forest, interspersed with occasional sandy plains. The chief mountains are close to the S.W. coast: they are the Darling Range, which contains *Mt. William* (3,600 ft.), the Herschel Range, and the Victoria Range. Further N., stretching from the Murchison to the Grey River, is a highland region, embracing several well-defined transverse ranges, of which the chief are Lockyer, Barbe, and Hamersley ranges. This region includes several summits of upwards of 3,000 ft. high, and *Mt. Bruce*, which reaches 3,800 ft. Most of the rivers are dry during portions of the year, and very few of them when full are navigable, even for small boats. The largest of them are the Blackwood, which runs S.W. and S. into Flinders Bay; the Swan River with its tributary the Avon, the Murchison, Gascoyne with its affluent the Lyons, Ashburton, Fortescue, Yule, and De Grey, all of which flow W. into the Indian Ocean. There are no lakes of any importance, but there are many shallow lagoons in various parts, of which the chief are Lefroy, Moore, and Austin. The climate is considered to be one of the finest and most salubrious climates in the world, the heat being greatly modified by cool sea-breezes. The soil is of all qualities: the fertile land occurs in patches, and some of it is of a very rich character. The animals are much the same as those in the other colonies, being chiefly of the Marsupial Orders. The vegetable productions include valuable hard woods; especially the eucalypti, jarrah, tuart, and kari, and sandal-wood. The mineral resources are, as yet, almost unknown; but they have been ascertained to include gold, copper, lead, and iron. The colony also possesses valuable pearl-fisheries. The population numbers 27,321, and consists mainly of people of British descent. The language is English.

¹ This colony was settled in 1829. Digitized by Google

POLITICAL FACTS.

The settled portion of the colony is divided into 12 *Electoral Districts*, and has for its *capital* *Perth* (7,000) on the Swan river, 12 m. from its mouth, an Episcopal see. Other towns are *Fremantle*, at the mouth of the Swan river, the port of Perth and the chief port of the colony; it is connected both by road and river with the capital; and *Albany*, on King George Sound, which has a splendid harbour and is the coaling port of the mail steamers. Agriculture and grazing are the staple *industries* of the colony: mining, pearl-fishing, and timber-cutting, employ a large number of inhabitants also. The chief *exports* are wool, copper, sandal-wood, and pearl-shells: the *imports* are manufactured goods, &c. There are a few fairly good macadamised roads between the chief towns, and some of the rivers are navigable for small craft to short distances from their mouths; there are also 40 m. of railways, and 1,570 m. of telegraphic lines. The administration of the colony is under a Governor appointed by the Crown, who is assisted by an Executive Council. There is also a Legislative Council. The colony has an *Education Act* in operation, and the schools are divided into elementary and assisted schools. The elementary schools are maintained at the cost of the colony, the assisted schools are private, and can receive capitation grants on submitting to government examination. The religion is Christian, the whole colony constituting a Church of England diocese.

TASMANIA.¹

PHYSICAL FACTS.

Latitude. Between 40° 33' and 43° 39' S. *Longitude.* Between 144° 39' and 148° 23' E. The estimated area is 26,215 sq. m. Its length is 200 m.; its breadth 180 m.

Obs. This insular colony originated as a convict settlement in 1804, was a dependency of the crown until 1825, and ceased to be a penal settlement in 1853.

Tasmania is bounded on the N. by Bass Strait; on the E. and S. by the Pacific; and on the W. by the Indian Ocean. The coasts are about 800 m. long, and rich in harbours and excellent anchorages; their chief features are the capes Grim, N. Point, and Portland, on the N.; Eddystone Point, St. Helen's Point, St. Patrick's Head, and Pillar, on the E.; Raoul, Tasman Head (on S. Bruny island), South-East, South, and South-West, on the S.; Rocky Cape, Point Hibbs, Sorell, Sandy Cape, and West Point, on the W.; the inlets, Anderson, and Ringaroma Bays, on the N.; George, Oyster, Prosser, and Marion Bays, on the E.; Port Arthur, Storm Bay, Adventure Bay, and Cloudy Bay (in Bruny Island), D'Entrecasteaux Channel, South Cape Bay, and Cox Bay, on the S.; Port Davey, Elliot Cove, and Macquarie Harbour, on the W. There are 55 Tasmanian islands, the chief of which are Hunter, Three Hummock, and Robbins, on the N.W.; Flinders, Barren, and Clark islands, on the N.E.; Schouten, and Maria islands, on the E.; and Bruny island, on the S. The surface is almost everywhere mountainous; but the two main chains are the Eastern Tier, or Dividing Range, which runs generally N. and S., has an average elevation of upwards of 3,000 ft., and culminates in Ben Lomond (5,010 ft.); and the Great Western Mts., separated from the Eastern Tier by the central district through which lie the communications between the N. and S. They form an elevated tableland which has a mean height of 3,000 ft., and from which ranges diverge in various directions.

¹ Or "Van Diemen's Land," so called after the Governor of Batavia. It was discovered by Abel Tasman in 1642. It was taken possession of by the British as a subsidiary penal settlement in 1803.

They embrace numerous peaks of 4,000 ft. high and upwards, and culminate in *Mt. Humboldt* (5,520 ft.). The island is well watered, abounding in fast-flowing rivers and streams. The chief *rivers* are, Forth, Mersey, Tamar, (formed by the union of the S. Esk, Macquarie, Esk, and Quamby); and the Boobyalla, or Ringaroma, which flow N. into Bass Strait; the Coal River, Jordan, and Derwent, which flow S.E. into Storm Bay, Heron, which flows into D'Entrecasteaux Channel, and Spring River which falls into Port Davey; the Gordon, King, Pieman, and Arthur rivers, which all flow W. into the Indian Ocean. The chief *lakes* are among the W. Highlands, and are, Great, Arthur, Sorell, Crescent, and St. Clair lakes, all of which lie about the middle of the island. The *climate* is remarkable for its mildness and salubrity. The mean annual temperature is about 50° Fahr. The *soil* is especially rich and fertile. The *animals* are of the same genera and species as those of Australia. The *vegetable productions* include all sorts of food-grain known to us in Europe; fruits of all European climes, and most valuable timbers, especially black wood, and Huon pine. The *mineral wealth* of the island has not been much explored, but it is known to include gold, iron, lead, manganese, copper, and limestone. The *people* number 105,484, and are mainly of British descent. The *language* is English.

POLITICAL FACTS.

The colony is divided into 18 *Counties*, and has for its *capital Hobart Town* (20,000), on the Derwent, about 12 m. from its mouth. It is an important port, a Bishop's See, and a well-built town. Other *chief towns* are *Launceston*, (10,688), on the Tamar, 40 m. from its mouth, the principal town near the N. coast; *George Town*, a small watering-place at the mouth of the Tamar; *Longford*, 18 m. S. of Launceston, and connected with it by railway, the centre of an important agricultural district; and *Stanley*, a large and important seaport on the N. coast, whence is shipped much of the agricultural produce of the district. Agriculture is the principal branch of the *industry* of this colony; grazing comes next in importance. There are also large numbers of people employed in fruit-preserving, and commerce; the *exports* are wool, timber, corn, oil, and fruit. The colony possesses some excellent *coach roads*, many *navigable rivers and streams*. *Railways* have been opened since 1871, and the system of *telegraphic communication* is being daily extended. The *Parliament* consists of a House of Assembly, comprising 32 members elected for 5 years, and a Legislative Council, consisting of 16 members, elected for 6 years. The legislative authority rests in both houses united, while the executive power is vested in a Governor appointed by the Crown. *Education* is warmly fostered by government. The system at work comprises elementary schools, at which the attendance is compulsory; middle schools; and high schools. The school registers contain about a tenth part of the population.

NEW ZEALAND.¹

PHYSICAL FACTS.

Latitude. Between 34° 12' and 47° 50' S. *Longitude.* Between 166° 36' and 178° 38' E.
The estimated area is 104,272 sq. m.

New Zealand comprises two large islands, viz. : *North and South Islands*, and a number of smaller ones, of which *Stewart Island*, to the S., is the chief. They lie in the S. Pacific Ocean, 12,000 m. from, and nearly at the antipodes of, Great Britain, and 1,200 m.

¹ *Tasman* discovered New Zealand in 1642; the land was not colonised till 1838.

S.E. of Australia. The islands form an extended line of nearly 1,200 m. *long*, and 120 m. *broad*, and trend generally towards the S.W. The whole of New Zealand is of volcanic origin.

Obs. In addition to the above islands and the islets adjacent to their coasts, there are several distant islands which are usually regarded as belonging to the New Zealand group, viz., *Auckland*, *Campbell*, and *Macquarie* to the S.; *Antipodes Island*, *Bounty Island*, and *Chatham* or *Warekauri Islands* on the E.; *Kermadec Islands* on the N.E.; and *Lord Howe Islands* on the N.W.

North Island¹ lies between 34°12' and 41°20' S. lat.; and between 172° 20' and 178°36' E. long. It is 500 m. *long*, has an extreme breadth of 250 m. and an *area* of 44,736 sq. m. In *form* it is very irregular, being characterised by its long peninsulas. It is separated from South Island by Cook Strait which is 13 m. across. The chief *capess* are Reinga, and North Cape, on the N.; Brett, Colville, Runaway, East Cape, Table Cape, Kidnapper's Cape, and Turnagain, on the E.; Palliser, and Terawitt, on the S.; Oaha Point, Egmont Cape, Albatross Point, Reef Point, and Cape Maria Van Diemen, on the W. Of the numerous *inlets* the chief are the Bay of Islands, Hauraki Gulf, Bay of Plenty, and Hawke Bay, on the E.; Palliser Bay, and Port Nicholson, on the S.; S. and N. Taranaki Bays, Manukau Harbour, Kaipara Harbour, Hokianga Bay, and Ahaipara Bay, on the W. The chief neighbouring islands are the Three Kings, off the N. W. coast, Great and Little Barrier islands at the entrance to Hauraki Gulf, and Karewha, in the Bay of Plenty, off the E. coast. The *surface* is mountainous in the centre, S.E., and S.W.; and is covered with dense forests of valuable timber. The chief *ranges* in the centre are Whanga with *Aroha* (2,000 ft.), for its chief summit, Whaiti, and Kaimanawa; W. of these is a volcanic group, embracing the peaks *Tongariro* (6,500 ft.), and *Ruapehu* (9,195 ft.) the loftiest point in North Island; in the *South East*, the Ruahine, Tararua, and Puketoi ranges; the mountainous promontory in the *South West* is occupied by the gigantic *Mt. Egmont* (8,270 ft.), whose conical peak is clad with perpetual snow. The island is well watered, having for its chief *rivers* the Waikato which rises near the centre and flows N.W. to Manukau Harbour, Piako, and Waihou or Thames, which also rise in the centre and flow N. to the Firth of Thames at the head of Hauraki Gulf, Mohaka which flows E. into Hawke Bay, Manawater, and Wanganui which both flow S.W. to S. Taranaki Bay. The principal *lakes* are Taupo, Terawera, and Roto-iti, all in the central parts of the island.

South Island² lies between 40° 30' and 46° 40' S. lat. and between 166° 30' and 174° 20' E. long. It is 500 m. *long*, 200 m. *broad*, and has an *area* of 55,224 sq. m. Its *form* is much more compact than that of North Island. It is separated from North Island by Cook Strait, and from Stewart Island by Foveaux Strait. Its *coasts* are remarkably even and unbroken, and in the W. bold and rocky.

The chief *capess* are Farewell, and Bush End Point, on the N.; Campbell, Pompey's Pillar (on Banks' Peninsula), and Cape Saunders, on the E.; Cape Providence, and West Cape, at the S.W. corner; Cascade Point, and Cape Foulwind, on the W. The most important *inlets* are Massacre Bay, and Tasman or Blind Bay, on the N.; Cloudy Bay, Pegasus Bay, Canterbury Bight, Otago Harbour, and Molyneux Bay, on the E.; Howell, and Tewaewae Bays, on the S.; Preservation, and Chalky Inlets, Dusky Bay, and Doubtful Inlet, on the S.W. Four fifths of the *surface* is mountainous; but there are extensive plains on the E. side. The mountains are known by the general name of the *Southern Alps*, which traverse the W. side of the island from N. to S., and send numerous

¹ North Island, formerly *New Ulster*, is called by the natives, *Te ika a Māui* (= "The bird of the Māui").

² South Island, Middle Island, or *New Munster*, has for its native name, *Te wahi Pūnamu* (= "The place of Greenstone").

transverse ranges to the Eastern plains: they rise beyond the limits of perpetual snow, and embrace some magnificent glaciers.¹ The highest summits are *Franklin* (10,000 ft.), *Una* (8,000 ft.), *Mt. Cook* (13,200 ft.), the culminating point of New Zealand, and *Mt. Aspiring* (9,919 ft.). The largest plain is the Canterbury Plain, which borders the E. coast for about 100 m., and stretches inland to the mountains, a distance of 20 m. The chief rivers are the Wairau, which goes N.E. to Cloudy Bay, Big River or Clarence, Dillon, Hurunui, Courtenay, Chomondely, Waitaki or Waitangi, and Molyneux or Clutha, which flow E. to the Ocean; the Mataura, Orell, and Waiau, which run S. into Foveaux Strait; the Taramakau, Grey, and Buller, which flow W. There are a good many lakes, the most important of them being Wanaka, Wakatipu, Anau, all in the S.W.

Stewart Island² lies S. of South Island, and is separated from it by Foveaux Strait. It also partakes of the generally mountainous character of the New Zealand Islands.

Climate of New Zealand is on the whole temperate and agreeable, and sometimes like that of the British Isles. But changes of weather and temperature are very sudden and frequent. Strong winds are prevalent throughout the Colony, and are violent in Stewart Island. In North Island the mean annual temperature is 57°, in South Island 52° Fahr.

Productions.—There are no indigenous animals except the native dog, and rat. There are several species of birds, which are peculiar to the country. There are no snakes. The vegetable productions include a great variety of tree ferns, many species of which are peculiar to New Zealand, most of the food plants which flourish in England, and excellent timber. Flax, and many other valuable fibrous plants, grow wild. The mineral resources are very valuable, comprising gold, silver, copper, iron, coal, sulphur, petroleum, building stones, &c.

Population is 399,075, and is of European extraction, except some 40,000 natives—who are called Maories—found chiefly in N. Island, and about 5,000 Chinese. The language is chiefly English.

POLITICAL FACTS.

The colony is divided into 9 provinces, which are subdivided into 63 counties. Of the Provinces 4 are in the N. Island and 5 in the S. The provinces and their chief towns are given in the table.

IN NORTH ISLAND.		IN SOUTH ISLAND.	
PROVINCES.	CHIEF TOWNS.	PROVINCES.	CHIEF TOWNS.
1. Auckland ..	<i>Auckland, Onehunga.</i>	5. Nelson	<i>Nelson, Westport.</i>
2. Taranaki ..	<i>New Plymouth.</i>	6. Marlborough ..	<i>Blenheim, Picton.</i>
3. Wellington ..	<i>Wellington, Wanganui.</i>	7. Canterbury ..	<i>Christchurch, Lyttleton.</i>
4. Hawke Bay	<i>Napier, Gisborne.</i>	8. Westland ..	<i>Hokitika, Ross.</i>
		9. Otago	<i>Dunedin, Oamaru.</i>

Notes on the Towns—**Wellington** (18,953), the capital of New Zealand, lies on the shores of Port Nicholson, an inlet of Cook's Strait. It was the first and chief settlement of the New Zealand Company. It is an important seaport, and a Bishop's See. **Dunedin** (22,525), the capital of Otago, is the largest, best built, and most commercial city in New Zealand. It stands at the head of Otago harbour, on the E. coast. **Auckland** (13,758), the largest city

¹ The *Tadman Glacier* on Mt. Cook surpasses in dimensions any of the Swiss glaciers.

² *Stewart Island* is called by the natives *Ra kiura*.

in North Island, was formerly the capital of New Zealand. It lies on the W. shores of Hauraki Gulf, has one of the finest harbours in the country, is a first-class seaport, and the See of a Bishop. *Christchurch* (13,425), the capital of Canterbury, lies on the Plain of Canterbury, 8 m. N. of the port of Lyttelton. *Graham's Town*, the capital and emporium of the Thames Gold Field; *Gisborne*, *Napier*, and *New Plymouth*, seaports on North Island; *Nelson*, *Pictou*, *Lyttelton*, *Oamaru*, *Timaru*, *Hokitika*, and *Westport*, seaports in South Island are other rising and important towns of New Zealand.

Agriculture, grazing, shipbuilding, timber trade, and mining, are the principal industries of New Zealand. The chief exports are wool, gold, copper, sulphur, flax, wheat, and timber. The communications include excellent roads, numerous navigable rivers, railways, electric telegraphs, and steam packet services. There are 8,444 m. of telegraph wires at work; and 1,140 m. of railway. The government of New Zealand is represented by a Governor, appointed by the Crown, a Ministry which forms the executive, and a Parliament of two chambers. Education is general, and liberally aided by the State: elementary instruction is carried on both in national and denominational schools, and for higher education a university has been provided at Dunedin. The religion is Christianity.

III. OTHER ISLANDS OF THE PACIFIC OCEAN.

Under this heading are included the countless islands, island groups, and islets which stretch Eastward from the Indian and Australian Archipelagos to, and beyond, the middle of the Pacific Ocean. Part of the islands are of volcanic origin and are mountainous; the rest are of coral formation, low and circular in shape. And even many of the volcanic islands are surrounded at greater or less distances by barrier reefs of coral formation. They lie within the tropics and have a normal climate, which is characterised by high degrees of heat and moisture. Their chief productions are cocoa palms, breadfruit, yams, sweet potatoes, bananas, rice, coffee, sugar, &c. The native populations amount to more than 1,000,000, but their numbers are rapidly diminishing in those parts where they come into close contact with the white man. These islands are usually thrown into three great insular regions, which are called, 1. *Micronesia*, 2. *Melanesia*, and 3. *Polynesia*.

i. MICRONESIA.

This region embraces a large number of small islands which lie N. of the equator and between the meridians 130° and 180° E. The chief of them are the *Bonin Isles*, the *Marianne* or *Ladrone Islands*, the *Pelew Islands*, the *Caroline Islands*, the *Kingmill* or *Gilbert Islands*, and the *Marshall Islands*.

Obs. 1. *The Bonin Isles*, a very numerous group belonging to, and lying S. E. of Japan. They arrange themselves in three groups, viz., a N. one, called *Parry Islands*; a central, of which *Peel*, and *Kater*, where whaling stations have been established by Europeans, are the chief islands; and a S. one, called the *Baily Islands*. They form part of the Archipelago of Magellan, and stretch from 26° 32' to 27° 45' N. lat. They are of volcanic origin, and mountainous. With the exception of *Peel* they are uninhabited.

Obs. 2. *The Marianne* or *Ladrone* (= *Robber*) *Islands*, an Archipelago consisting of some large, and a good many small, islands, lying S. E. of the Bonin Isles, and between 13° and 21° N. lat., and constituting a Spanish possession. Only five of them are inhabited, and they contain a population of some 6,000, who are mainly of Spanish descent. The islands are of volcanic formation, fertile, and yield rice, sugar, cotton, indigo, &c. The capital is *Agarra*, on the large island *Guahan*.

Obs. 3. *The Pelew Islands* form the most W. group of Micronesia. They lie 600 m. E. of the Philippines and number 10 islands, some of which are mountainous while others are low coral islands. The largest island, *Babelthuap*, is 30 m. long. The group is well-wooded and produces yams, bananas, cocoa-nuts and fruits. The

people are small of stature, very dark skinned, and exhibit characteristics which point to both a Malayan, and a Papuan origin.

Obs. 4. The Caroline Islands or New Philippines, comprise a number of distinct groups, extending E. and W. through a space of some 2,000 m., and lying between the Ladrões, and New Guinea. The chief of them are Hall Islands, Hogolen Islands, Enderby, Pullen, and Yap. The seas around these islands abound in fish, upon which the people chiefly subsist. The *climate* is genial and agreeable, and the chief productions are the cocoa-nut, bread-tree, arum or taro, and betel-nuts. The people number about 30,000, and belong chiefly to the brown or Polynesian stock. The islands belong to Spain, but contain no Spanish settlement.

Obs. 5. The Marshall Islands, or Mulgrave Archipelago lie E. of the Carolines, between 12° N. and 30° S. lat. They include some 50 islands most of which are lagoon islands. The chief productions are the pandang—the staple food in several of the islands,—the cocoa-nut, and the bread-fruit. The people number about 10,000, and resemble the Caroline Islanders.

ii. MELANESIA.

Melanesia lies S. of the equator and off the N. and N.E. of Australia, and comprises all the islands extending from New Guinea in the W. to Fiji in the E. The most important of them are *New Guinea, Admiralty Isles, New Britain Archipelago, Solomon Islands, New Hebrides, Santa Cruz Islands, New Caledonia, Loyalty Islands, and the Fiji Islands.*

Obs. 1. New Guinea or Papua, by far the largest island of the oceanic group which we are now considering, lies N. of Australia, from which it is separated by Torres Strait, and the Arafura Sea. It is 1,490 m. long, and in places about 400 m. broad, and has an area of some 300,000 sq. m. The *surface* is but little known, but it is said to be overgrown with dense virgin forests, and that the island is traversed from N.W. to S.E. by a lofty range of mountains, called the *Stanley Range* in the E., and the *Charles Louis Mts.* in the W., embracing summits of nearly 18,000 ft. high. The *climate* is wet and pestilential, but the *soil* is most fertile. Among the *animal productions* is the Bird of Paradise, which is native to these regions; the *vegetable productions* include camphor trees, sago palms, spices, cocoa-nuts, maize, rice, sugar cane, &c. The *people* are Papuans, a woolly-haired race, of very dark skins, great ugliness, and low intellectual capacity. The Dutch have a small station on the shores of Galvink Bay, on the N.W. coast, on the strength of which they claim the Western half of the island.

Obs. 2. The Admiralty Islands comprise one large island of 60 m. long by 20 m. broad, and a large number of small ones, lying between the parallels 1° 50' and 3° 10' S., and between the meridians 146° and 148° E., and about 160 m. E. of New Guinea. The islands are generally low, have a hot, moist *climate*, are densely wooded, and yield spices, sago, rice, cocoa-nuts, sugar, &c. The *people* are of the Papuan race, but allied by linguistic peculiarities to the Caroline Islanders rather than to those of New Guinea.

Obs. 3. New Britain Archipelago consists of the two large islands New Britain and New Ireland, and a number of small ones. New Britain is about 300 m. long, and 30 m. wide, and New Ireland about 230 m. long, and about 12 m. wide. The islands are volcanic and mountainous, and yield mangoes, cocoa-nuts, bananas, yams, sweet potatoes, &c. The *people* are mainly of the Papuan race; and those of New Ireland are said to be cannibals. Of the smaller islands New Hanover on the N.W. of New Ireland, and Rook and Long Islands S.W. of New England, are the chief.

Obs. 4. The Solomon Islands form a double insular chain stretching about 700 m. from N.W. to S.E. They lie E. of the New Britain Archipelago, and embrace 7 large and many small islands. The large islands are *Bougainville, Choiseul, Mahaga, New Georgia, Guadalcanar, Malanta, and San Christoval.* The whole Archipelago is volcanic and very mountainous, covered with grand forests, and bears a most luxuriant and beautiful vegetation. Among the woods grown here are sandal-wood, ebony, and lignum-vitæ. The *people* are a woolly-haired dwarfish race, and are cannibals.

Obs. 5. The New Hebrides, and Santa Cruz Islands embrace three distinct groups, which are separated from one another by some 60 m. of sea, and called respectively the S. New Hebrides, N. New Hebrides, and Banks' Islands, and the Santa Cruz islands. They lie between the parallels 9° 45' and 20° 10' S. lat., and between the

meridians 165° 40' and 170° 30' E. long., stretching N.W. and S.E. for a distance of 700 m. Most of them are of volcanic origin, and they include several volcanoes which are still active. The chief islands are *Erromango* in the S., *Mallicolo*, and *Espirito Santo* in the central, and *Nitendi* or *Santa Cruz*, in the N. groups. They are clothed with a luxuriant vegetation, and cocoa-nut palms abound everywhere. The people have been termed *Melanesians*, for want of a better designation. They resemble the Australian in features, but have the woolly hair of the Papuan. At least twenty distinct languages are spoken in the New Hebrides. Cannibalism is practised in most of the islands.

Obs. 6. New Caledonia, a large island of some 6,000 sq. m. in area, occupies the S. extremity of Melanesia, and is 700 m. E. of Australia. It is almost entirely surrounded by coral reefs. Its surface is mountainous, and embraces peaks of 5,000 ft. high; much of it is bare and arid, but there are forests on some of the mountain sides, and in the N. parts of the island. The chief products are gold, nickel, and copper; timber, and cocoa-nuts. The natives are a well built race, with dark skins and woolly hair. They are cannibals, and go naked. New Caledonia is a French colony and penal settlement.

Obs. 7. The Loyalty Islands are a small insular chain lying 70 m. E. of New Caledonia, and embracing three chief islands, viz., *Uvea*, *Lifou*, and *Mare*. They are all coralline and, to a large extent, barren. Their chief product is sandal-wood. The people resemble the natives of New Hebrides, but are much more civilised. These islands also belong to France.

Obs. 8. The Fiji or Viti Islands are a large Archipelago of 254 islands and islets, the chief of them being *Viti Levu*, and *Vannua Levu*. They lie E. of the New Hebrides between 16° and 20° S. lat., and 177° and 182° E. long., and are begirt with coral reefs. The islands are of volcanic origin, and many of them are mountainous. The climate is salubrious and agreeable, the soil almost everywhere fertile, the vegetation dense and luxuriant, while the productions include perfumed barks and woods, cocoa-nuts, cotton, bread-fruit, bananas, arrow-root, sugar, coffee, &c. The Fijians number about 150,000, and are a dark-skinned, frizzly-haired, and bearded race. Civilization and Christianity have made considerable progress among them, but there is still cannibalism in many of the islands. There are also about 1,600 Europeans there. The whole Archipelago was formally ceded to Great Britain in 1874.

Viti Levu is about 90 m. long, and 60 m. wide, and of oval shape. *Vannua Levu* is somewhat larger, but narrower and of more irregular form. Both islands are mountainous, *Viti Levu* rising in places to heights of from 4,000 to 5,000 ft. above the level of the sea.

iii. POLYNESIA.¹

Polynesia is the name applied to the E. portion of the Pacific islands. It embraces several distinct Archipelagos with some smaller dependent groups. The physical features of the region are in the main similar to those of Micronesia. The area of the whole is estimated at 10,000 sq. m., and the population at about 250,000. The principal islands and groups are the *Tonga* or *Friendly Islands*,² *Samoa* or *Navigator's Islands*, *Union* and *Ellice Islands*, *Phoenix Islands*, *Hervey* or *Cook Islands*, *Austral Islands*, *Low Archipelago*, and *Pitcairn Island*, *Easter Island*, *Society Islands*,³ *Penrhyn* or *Manahiki Islands*, *Marquesas Islands*, *America Islands*, and the *Hawaiian* or *Sandwich Islands*.

Obs. 1. The Tonga or Friendly Islands, S.E. of Fiji, are composed of a numerous group of coral and volcanic islets, with the rather larger island of Tongatabu. Several volcanoes on the group are still active, and there are numerous cones of extinct volcanoes. The climate is good, and the soil fertile; the chief products are timber and cocoa-nuts, fruits and vegetables. The people belong to the Polynesian race, and are in advance of all other South Sea Islanders in civilization and social development; they number about 10,000 souls, and have become Christians.

Obs. 2. Samoa or Navigator's Islands lie 350 m. N. of Tonga, and consist of a group

¹ Polynesia = "numerous islands."

² Discovered in 1643 by Tasman; named by Cook from the friendliness of the natives; they have since been proved to be treacherous and cunning, and murderers of missionaries.

³ Society Islands, so named by Cook in honour of the Royal Society of Great Britain, who sent him out there in 1769 to observe a transit of Venus.

of four larger, and numerous smaller islands. Their united area is 1,200 sq. m. The larger islands are *Upolu*, which contains the chief town *Apia*, which has a good port, and is the emporium of the produce of many of the Pacific islands, *Savaii*, *Tutuila*, and *Manna*. These islands are of volcanic origin, and are amongst the most beautiful and productive parts of these regions, and abound in tropical fruits, cocoa-nuts, cotton, coffee, maize, &c. They are, however, subject to hurricanes and earthquakes. The people are amongst the fairest complexioned of all the Polynesian races, and have made much progress towards civilization under the teaching and guidance of missionaries. This Samoan group has, since 1872, been a protectorate of the United States.

Obs. 3. The Union, and Ellice Islands are two small groups which lie N.E. and N.W. of the Samoan group. The *Union* or *Tokeau* group embraces three small islands, which are valuable for their guano deposits. The native population is about 500; but there are a good many Americans also who are engaged in the guano trade. The *Ellice* group, some 700 m. N.W. of *Savaii*, consists of a number of low coral islands and atolls, which are inhabited by some 1,200 souls of Samoan origin who have been christianised.

Obs. 4. The Phoenix Islands are a small group which lie N.E. of the Ellice Islands. The chief of them are *Phoenix*, *McKean*, *Gardner*, *Hull*, and *Enderbury*.

Obs. 5. Harvey or Cook Islands, 700 m. S.E. of Samoa, consist of nine islands, of which *Rarotonga*, and *Mangaia*, the southernmost members of the group, are chief. They are either volcanic or coralline, and are difficult of access on account of the dangerous reefs which skirt them. The chief productions are bananas, cocoa-nuts, bread-fruit, cotton, coffee, tobacco, &c. The people, said to be of Samoan origin, number about 10,000 souls; they have been christianised and civilised, and have adopted the European style of dress.

Obs. 6. The Austral or Tubuai Islands, and Paumotu or Low Archipelago, lie at the S.E. corner of the Pacific insular region. The *Austral* group are volcanic, and well watered, but not much visited. The *Low Archipelago* consists of a sparsely peopled group of some 80 islets surrounded by coral atolls. They are important on account of their valuable pearl fisheries, and their large yield of cocoa-nut oil. The group forms a protectorate of France. The *Gambier Islands* near the *Low Archipelago* are also under French protection.

Obs. 7. Pitcairn Island, E. of the Austral group, is famous as the original home, in 1789, of the mutineers of "The Bounty." It is 2 m. long, and three quarters of a mile broad. It is volcanic and mountainous, rising in its highest point to 2,500 ft. Its climate is fine, its soil fertile, and its productions embrace the usual tropical fruits and vegetables. In 1878 the islanders numbered 90 persons.

Obs. 8. Easter Island, the most easterly of the Pacific Islands, is 1,300 m. E. of Pitcairn Island. It is 11 m. long, and 4 m. broad, and is volcanic and mountainous. It possesses neither streams nor wood. The natives belong to the fair Polynesians, and are said still to practise cannibalism. The island is celebrated for its most interesting remains of a past civilization of a very advanced degree. It is regarded as the great mystery of the Pacific, and its antiquities afford an insoluble riddle.

Obs. 9. The Society Islands are a group of eleven islands lying N. of the Austral Isles and having an aggregate area of 650 sq. m. They are volcanic, mountainous, and fertile. *Tahiti*, the chief island, is famous for its charming scenery, its delicious climate, its fertility, and the perfection of its tropical fruits and vegetables. It has an area of 600 sq. m., and rises in *Mt. Orohena* to 7,340 ft. The people number about 18,000, and belong to one of the most finely developed races in the world. Their skin is dark brown and their hair curly, but they have not much beard. Many of them have been converted to Christianity. The group forms a French Protectorate. The capital is *Papeete*, a small city of 2,000 inhabitants, 600 of whom are Europeans.

Obs. 10. Penrhyn or Manahiki Islands are a few widely scattered islets lying some 10° N. of Cook Islands. Most of them are low coral islands, and Penrhyn, the best known of them, is interesting as being on the E. boundary of the Melanesian race. Fishing and pearl diving form the chief occupations of the people.

Manahiki or Humphrey Island, the largest of the group, is a coral lagoon island 6 m. long, and 5 m. wide. The natives, some 400 or 500 in number live upon cocoa-nuts and fish. They are all Christians, and some of them read and write English.

Obs. 11. The Marquesas Islands lie N.E. of the Low Archipelago, and form a group of 17 islands with an aggregate area of 500 sq. m. They are of volcanic origin and mountainous, rising, in places, to a height of 3,600 ft. The climate is, generally speaking, salubrious, and the soil fairly fertile. The productions include cocoa-nuts, yams, sugar-cane, cotton, &c. The natives number about 4,000, and are described as the finest of all the South Sea Islanders. Their skin is yellow, and a

good muscular development is common to them all. They are said still to be savages, and to indulge in the practice of cannibalism, though recently many of them have adopted the Catholic form of Christianity. The group are under French protection. The chief island is *Nukuhiva*, which contains the lively port of *Taiohai*, the residence of the French commissioner.

Obs. 12. The Sandwich Islands lie N. of the Equator, near the tropic of Cancer. They consist of seven large and inhabited volcanic islands, viz., *Oahu*, *Kauai*, *Niihau*, *Mau*, *Molokai*, *Lanai*, and *Hawaii*, and several rocky and barren islets. Their aggregate area is 8,000 sq. m. The climate, generally speaking, is delightful, and the soil fertile. The common productions are the banana, breadfruit, guava, cocoa-nuts, arrowroot, sugar, coffee, cotton. The people number about 50,000, and are amongst the most civilised of the Pacific Islanders. There are also many European settlers. *Hawaii*, the chief island of the Archipelago, contains the three loftiest mountains in Oceania, viz., *Mauna Kea* (13,840 ft.), *Mauna Loa* (13,650 ft.), and *Hualalai* (11,020 ft.), all active volcanoes. East of *Mauna Loa* lies *Kilauea*, perhaps the most remarkable burning mountain in the world, the crater of which is easily accessible, and always presents a lake of fiercely glowing lava.

Since 1844 the group has been a constitutional monarchy, and since 1864 has enjoyed a parliamentary administration. This State has good roads, houses built in the European style, and 300 schools. The capital and residence of the king is *Honolulu*, in *Oahu*, a town of 14,000 inhabitants.

ANTARCTIC LANDS.

These are tracts of land which have been discovered within the Antarctic circle. The chief of them are—

Graham's Land, and **Louis Philippe Land**, S. of Cape Horn.

Sabrina Land, and **Adelie Land**, S. of Australia.

South Victoria, S. of New Zealand, discovered by Sir James Ross in 1839-43, who penetrated as far as 78° 11' S. lat. A wall-like glacier, behind which were gigantic mountains, stayed his progress. The active volcano, *Erebus* (12,400 ft.) and the extinct volcano *Terror* (10,900 ft.) are in the mountains S. of this glacier.

Obs. These lands have been so little explored, that it is not known whether they form part of a great antarctic continent or not.

Belonging to this hypothetical continent are also the **Balleny Islands**, the **South Shetlands**, the **South Orkneys**, and the **Sandwich Group**.

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ABBREVIATIONS.

<i>arc.</i> = archipelago.	<i>dis.</i> = district.	<i>m.</i> = mountain.	<i>sta.</i> = state.
<i>b.</i> = bay.	<i>g.</i> = gulf.	<i>pen.</i> = peninsula.	<i>str.</i> = strait.
<i>c.</i> = cape.	<i>gl.</i> = glacier.	<i>p.</i> = point.	<i>ter.</i> = territory.
<i>can.</i> = canton.	<i>har.</i> = harbour.	<i>pl.</i> = plateau.	<i>tn.</i> = town.
<i>ch.</i> = channel.	<i>hd.</i> = head.	<i>pro.</i> = province.	<i>val.</i> = valley.
<i>co.</i> = county.	<i>i.</i> = island.	<i>r.</i> = river.	<i>vol.</i> = volcano.
<i>dep.</i> = department.	<i>l.</i> = lake.	<i>so.</i> = sound.	

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